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ABSTRACT

The role which recreation as an industry can play in economic development of an area -- through creation of jobs, generation of incomes, and stimulation of public and private investment -- is the primary concern of this 1966 study. The document establishes the tourism-recreation industry as being resource-based, with enterprises which are mainly trades and services and which alone can rarely provide a base for a viable economy. However, the tourism industry can provide supplementary benefits to a local economy based on manufacturing, mining, or agriculture. The report examines the direct and indirect economic effects of expenditures arising from tourism recreation, and developmental effects as to the establishment of tourist attractions. The document is appended with an annotated bibliography and with data related to Appalachian multipliers (estimated indirect effects of employment income as it circulates and recirculates). (AN)

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Appalachian Research Report No. 2

RECREATION AS AN INDUSTRY

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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SUMMARY AND CONCLUSIONS

This study is concerned with the impact on local economies of the complex of activities that compose the "tourist recreation" industry. The impacts are mainly of three kinds: (1) the direct effects of the recreation expenditures of visitors to an area; (2) the indirect or "multiplier" effects as the spending circulates and recirculates; and (3) the development effects of the recreation industry as a stimulus to sustained economic growth of the area.

These subjects have been investigated in the literature on the recreation, in detailed field case studies of nine recreation "situations," and in the statistics of the trade and service activities comprising the "recreation industry." The first-hand field observations provided specific information on the nature of the impact. They verified findings of other studies, provided new information and insights, and illustrated specifically the operation of the multiplier.

The economic significance of the recreation industry in a local economy derives from its characteristics as an "export" industry, that is, an exchange of goods and services originating in the area for income originating outside. In this respect it is similar to mining or manufacturing for sale outside the area, and differs from the sale of services, including recreation, to residents of the area. The significance of this distinction lies in the fact that a local economy must "export" in order to pay for "imports" of goods and services which it cannot produce but on which its living and its growth depends.

This being so, the impact of recreation on a local area depends on the nature of its recreational resources, the volume of visitors it attracts, the volume of their expenditures, and the extent to which the expenditures are retained in the area to pay for goods and services locally produced.

Recreation resources vary in type and quality -- scenic, climatic, historical, cultural, or entertainment -- and there is no unique formula by which attractiveness is determined. The ability of a resource to attract visitors may depend on its rarity or on the diversity of recreation activities it offers.

Location and accessibility to large populations is equally an important factor. Other things being equal, attractiveness varies directly with the size and quality of a recreation complex and inversely with distance from metropolitan populations. Field observation verifies that recreation complexes bring more visitors than single attractions, and those with convenient access more than those that are remote. The volume of visitors' expenditures depends on the nature of the recreation facilities -- overnight visitors spend more than day-users -- and on the variety of goods and services available for purchase. Here again, diversity is an asset.

The degree to which a local area is able to retain as income the money spent by visitors depends on the ability of the local economy to produce the goods and services they buy. The more these are locally produced, the greater the impact; the more they are "imported," the smaller the impact, though, as the case studies demonstrate, leakage from a local economy often creates additional demand and income in the regional economy. This is clearly shown in the multiplier effect for individual Appalachian counties.

A "multiplier" is an estimate of the effect on the employment of an area produced by the addition of a single job in the area's "export" (or "basic") employment. Each job yields income; most of the income is spent for goods and services. Some of the goods and services are produced locally and generate more jobs and more income, and so on. Some are "imported" and generate no jobs locally except those required for importing and distributing. The whole chain of effects can be summed up in one composite multiplier.

As would be expected, the broader the economic base of an area, the wider the variety of goods and services produced, the smaller the "leakage" in imports, and the greater the multiplier effect of an additional job in "export" production. In populous counties, estimated multipliers averaged 2.21; in small counties, estimated multipliers averaged 1.67. This means that an additional job created by tourist recreation (or any other "export" industry) generated 1.21 additional jobs in the first case, and 0.67 jobs in the second.

Thus, the absolute impact of a dollar of tourist expenditure is least in the smallest, least economically developed counties. But, because these counties are small and less developed, the impact may be significant relative to the size of the local economy.

However, there are several factors that limit even the relative impact of the recreation industry, even in a poor county. The first is the nature of the industry itself, composed, as it is, largely of services and trades which everywhere are among the lowest-paid: hotels, restaurants, and amusements. National statistics show, and our case studies confirmed, that although recreation provides many opportunities for proprietors of small business and generates demand for high and middle skills in construction and maintenance, the typical and average employment is in undemanding jobs with relatively low productivity and consequently low pay.

Moreover, the seasonal nature of recreation is reflected in irregularity of employment that limits annual earnings and tends to attract workers from the fringes of the labor force. Though there is evidence of the success of many segments of the industry in lengthening the season by capitalizing on the rising incomes and increasing time and taste for a variety of recreation activities (skiing,winter vacations, weekending, etc.), the industry remains one of the most seasonal. As the case studies show, the two-month summer season is no longer so common as it was, but few "seasons" extend beyond six months.

As the result mainly of these two characteristics, recreation alone almost never can provide a base for a viable economy. Where it is successfully exploited, however, it can provide significant and valuable supplementary benefits to a local economy based on manufacturing, mining, or agriculture:

1. It provides employment by which supplemental earners, mainly women, can augment the family incomes in the area.

2. The effects of visitors' spending can have a multiplier effect on the non-recreational segments of the local (or regional) economy.

3. It provides opportunities for investment, usually financed by personal resources or by the capitalization of rising land values, as farm land or low-grade commercial land is upgraded to more valuable uses.

4. It provides opportunities for proprietors of small businesses in motels, restaurants, and trade, with corresponding demands on enterprise and management in a highly competitive market.

5. It enriches the tax base and augments tax revenues. By the same token, it increases the demands for some public facilities, notably, roads, water supply, and sewerage, but not for others, notably, education.

6. In areas within easy reach of metropolitan areas, it may lead to construction of second homes for vacation, retirement, or permanent use, thereby providing employment in the construction industry and a permanent flow of expenditures of incomes originating outside the area.

7. As discussed below, it can, under certain circumstances, induce changes in the environment and climate for development that can extend beyond the recreation-based industries.

The expansion in recreation in an area also raises issues of public policy. Since the recreation industry is often a joint product of development for some public purpose -- conservation of land or water, the generation of electric power, improved highway transportation, or providing public recreation facilities for metropolitan populations -- there may be conflicts between the primary public purpose and the maximum economic impact on the local area. For example, the maximum impact may not be compatible with the optimum use of the resource for other purposes. This may lead to curtailment of commercial activity to prevent over-use or impairment of the quality of the resource (for example, pollution of water resources).

Can recreation development stimulate self-sustaining economic growth in a local area? It is possible, but only in certain circumstances. There are wide variations of kind and intensity of recreation as an industry. Millions of day-use visitors may come and go with only a minimal economic effect. Transient overnight visitors spend less than visitors to areas of diversified attractions who stay a few days more and generate jobs in recreation and entertainment. High quality establishments are in greatest demand, and in off-peak periods the demand is almost exclusively for high quality establishments. Intensive activities, for example summer theater or race tracks, will induce more spending and higher grade employment and, apparently, more development effects. Higher investment not only of capital but of ingenuity, enterprise, and skill will yield higher returns.

The impact and development stimuli thus vary with the kind, as well as the extent, of recreation-based activities.

But beyond the direct and indirect monetary flows, intensive recreation activity can have slow-acting, long-lasting development benefits on communities intent on realizing them. The influx of visitors, particularly to cultural attractions, or the presence of second home owners can bring, along with money, new entrepreneurs, new ideas, higher standards of commercial and public services that can lead to development in industries other than those directly dependent on tourist recreation. This will happen when the community is alert to the opportunities to improve its competitive position in other "export" industries and is organized to develop and promote them. This has immediate significance in cases of joint demand, when the demand for tourist goods and services is combined with the demand for other goods and services.

Similarly, development possibilities may arise from joint supply. Where the requirements of the recreation industries are shared by other industries -- for example, the need for good water supply and sewerage -- satisfying them for the recreation industries may stimulate other industries as well, if other competitive conditions are favorable.

From the point of view of public policy with respect to Appalachia, two principal conclusions can be drawn:

First, major public investment in non-metropolitan recreation resources would rarely be justified solely or even primarily, for the sake of the economic impact on the local area. The principal justification for public investment in recreation is to satisfy the demand for recreation in a society which is becoming increasingly metropolitanized, in which recreational open space is at a premium. The economic impact, such as it is, will likely be marginal and justifies public investment commensurate with the marginal benefits.

Second, in satisfying the demand for recreation, *per se*, there may be choices between alternative modes and locations. When such alternatives exist, the local economic impact may be one of the determining considerations in the choice of one recreation "situation" or another for public investment. The economic impact on the local area will be greatest to the extext that --

(a) The location is accessible to the largest metropolitan populations.

(b) The resource lends itself to large, complex and diversified forms of recreation and opportunities for recreational spending.

(c) Private or public enterprise and capital are available to exploit the resource efficiently.

(d) The proposed recreation activities themselves are intensive, that is, characterized by high value added per dollar of receipts, as the result of high inputs of capital, or of labor, or of both.

(e) The area has potential for providing a significant share of the goods and services bought by tourists -- at a minimum, the service skills, the construction and maintenance, the retail trade, the farm produce, and some of the handicraft.

(f) The area has development potential, in terms of location, labor force, infrastructure, enterprise, community organization and leadership, and preferably natural resources, to develop "export" industries other than recreation, and the development of recreation will provide benefits that will stimulate other forms of development.

I. INTRODUCTION

Focus of the Study

The purpose of this study is to determine the role which recreation as an industry (that is, as a complex of economic activities) can play in the economic development of an area: the creation of jobs, the generation of incomes, the stimulation of public and private investment and the attitudes, institutions, and facilities that foster economic growth. Because it considers recreation as an industry, this study differs from many other studies of recreation, such as those concerned with recreation as an activity, or as a form of consumption or of consumption expenditures, or those concerned with demand or supply.

Recreation has been broadly defined as those activities which people pursue in their leisure time. This encompasses a wide range of activities engaged in with varying frequency, intensity, and duration, ranging from reading a novel on a subway to taking an African safari. Since our present concern is with the role of recreation in a real economic development, the definition can be considerably narrowed. This study is concerned with tourist recreation (that is, those leisure time activities which are enjoyed away from the home area), and with the economic activities generated in the recreation area by expenditures of visitors from outside.

The focus on tourist recreation is predicated on the fact that a small area, lacking the natural, human, and manmade resources for self-sustaining growth, must depend for its growth of output and real income on its exports to other areas. The recreation activities of local residents, while they are a source of employment and income within the local spending-saving pattern, involve an exchange, but no increase of local income. But the recreation activities of non-residents, spending income originating outside the area, generate "exports," that is, the exchange of locally produced goods and services for non-local income.1/ As such, tourist recreation may be

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1/ To the extent that local recreation expenditures substitute for those which would otherwise be made outside the area, they may be considered "import substitutes," with effects similar to exports.

expected to contribute to economic growth and development. This study attempts to describe these development effects and to measure them approximately.

In the analysis the existence of a demand for recreation away from home is assumed. Its magnitude and extent have been documented in many previous studies and in the operating experience of Federal and other agencies. Projections of growth in demand also are available, predicated mainly upon the growth of population, leisure time, disposable income, and mobility. Because these determinants of the demand for recreational goods and services are growing, recreation is one of the fastest growing sectors of consumer demand. But the supply is relatively elastic, and there is keen competition among the many areas and activities which offer or are capable of offering similar opportunities for recreation or equally appealing alternatives. These compete for visitors and visitors' expenditures in a variety of ways which will be described and evaluated in later chapters. The study will examine the conditions under which competition is successful and the benefits which success brings.

In meeting the supply of recreation facilities, investment by both public and private sectors competes for financing with alternative activities, and the decisions as to the allocation of limited resources are made on the basis of considerations which, to a large extent, are outside the scope of this study. Public attitudes toward the desirability of public recreation areas -- free or at nominal cost; conservation of unique natural features; the role of open space in physical and emotional well-being; the need for flood control, water storage, and water power; the utility of inland water transportation -- these are among the many factors influencing decisions to develop or create resources for recreational use. Private decisions are based on equally diverse considerations, including profitability, proximity to other recreational resources, ease of entry or previous experience in the recreational industries, availability of capital, etc. These factors will be dealt with insofar as they impinge directly or indirectly on the industrial aspects of recreation.

Although a substantial part of the recreation industry is centered in metropolitan areas where so much of the population lives, metropolitan areas have been excluded from this study except as they are the source of demand for recreation services in non-metropolitan areas. There are several reasons:

1. Most metropolitan recreation industry -- theaters, restaurants, bowling alleys, etc. -- is local, not export. Tourist recreation is economically significant as an "export" in only a few great metropolitan areas (most notably New York City). While visitors to the metropolitan areas of Appalachia do patronize recreation establishments which are primarily engaged in serving the local base population (i.e. in non-basic activity) most are not recreation visitors in the sense that we are considering them in this report. They are attracted to cities for other purposes and would in most cases come no more or less frequently whether recreation attractions were augmented or not.

2. The ever-increasing proportion of the population which lives and works in the metropolitan areas is an important factor in the growing demand for tourist recreation, especially outdoors. This study is designed to identify and measure the economic benefits which flow from serving the recreational needs and desires of the primarily metropolitan populations.

3. The non-metropolitan portions of Appalachia pose the most difficult development problems. These are the areas which have turned to the recreation resources as means for development, and the analysis has been directed to their prospects and hopes.

Definitions

Visitors. In this study, visitors are those who come to an area from outside, primarily for the purpose of engaging in recreational activities. Although it is often impossible to distinguish such visitors statistically from persons traveling to an area for reasons of commercial or personal business, in the areas chosen for study here the latter are believed to account for only a small part of the economic impact. It is characteristic of the visitors who are the object of this study that they are tourists, and a great part of the economic impact of their recreation activities derives from their expenditures for lodging, food, and motor fuel away from home. They may also buy souvenirs, crafts, toys, sports equipment, gifts and clothing as well as a miscellany of things one wants or needs away from home. It is characteristic of these visitors also that, in contrast to those traveling for commercial or personal reasons, they are influenced in their decisions by the attractiveness of recreational areas and of the facilities it offers. Unless otherwise specified, the terms "visitor," "recreationist," "vacationer," and "tourist" are used synonomously in this report.

Impact. The study is concerned with the tangible economic effects, both direct and indirect, of the expenditures arising from tourist recreation. These include jobs, income, investment and tax revenues. Other forms of impact of tourism are treated only incidentally.

Development. This study is concerned with the development effects of recreational tourism in two respects. We speak of the development of recreation as an industry to describe the establishment and exploitation of attractions which draw visitors and the enterprises which serve them. Chapter III discusses the development effects of recreation in this sense.

In addition, the flow of outsiders, especially to a remote area, and the economic stimulus generated by their expenditures and the growth of the economy, may set off a process of more fundamental development of the area and its resources. This process is concerned with those changes in the social and economic character of the area and its human and natural resources which would enable it to compete more successfully in regional and national economic life. In this aspect of development the emphasis is on changes in the outlook of the population, the quality of the labor force, the physical environment, and the standards of public facilities and services which may lead to economic growth apart from that immediately associated with recreation. These effects, while not easily susceptible to quantitative measurement, can be identified and their relationship to the growth of economic activity can be demonstrated. Development in this sense is dealt with in Chapter IV.

Study Approach

The central issues have been attacked in three interrelated efforts: a search of the available literature; on-site observation and analysis of nine specific recreation complexes; statistical analysis incorporating the data of input-output tables and available national and regional accounts, and information developed from the literature and field research. The results of the analysis are presented under three general headings: description of recreation as an industry; the direct and indirect economic effects of recreation enterprises; the development effects of recreation.

Literature Search

The search of the literature yielded several hundred titles related to some phase of recreation. The collection of titles was facilitated by extensive help and cooperation extended by the National Association of Travel Organizations; the Bureau of Outdoor Recreation, U.S. Department of the Interior Economic Research Service of the U.S. Department of Agriculture; the Science Exchange Service, the Smithsonian Institute; the working libraries and useful insights of individual researchers at Resources for the Future, Inc.; the Pennsylvania State University; resumes of current research work in process at various institutions and agencies; Richard Raymond Associates; as well as extensive references already collected by the joint contractors.

Most of the titles were examined and their contents scanned. Approximately 100 published and unpublished reports and studies were given more careful review. About 50 of these were selected for detailed examination. Their pertinent contents were abstracted and classified. The useful information was grouped and filed for easy reference under twelve subject headings and numerous sub-headings. Each of the subject headings deals with one of the aspects of the central impact question or related special aspects of the recreation industry. The results of this work appear as an annotated bibliography in Appendix A of this report.

The literature found to contain relevant data was placed in one of the following categories: (1) visitor expenditures; (2) visitor characteristics; (3) employment; (4) income; (5) taxes; (6) investment; (7) impact on economy; (8) vacation homes; (9) seasonality; (10) promotion; (11) development control; (12) recreation industry -- general.

Economic Research Service studies, state planning studies, and industry statistics published by objective observers, such as certified public accountants, seemed most productive. Most numerous were studies performed by state agricultural experiment stations and related institutions of farmers offering relatively simple outdoor recreation facilities or of small motels, cottages, and fishing camps located in rural areas. Industry data are particularly useful for their presentation of construction costs per unit and the distribution of operating expenditures by hotels and motels (with and without restaurants and/or beverage facilities). The state planning studies provide useful insights into the spending habits of certain kinds of recreationists, e.g. skiers in New Hampshire. Some studies had information about the direct employment generated by particular recreation activities. The statistical information yielded by summaries of these research efforts is drawn on in the analysis in Chapter III -- Economic Impact. The revealing glimpses of other aspects of the recreation industry are incorporated in Chapter IV -- Development Impact.

Field Studies

The examination of the literature and the experience of the contractors suggested general criteria for the selection of areas for detailed field investigation. Certain factors affecting the local impact of recreation were discernible: intensity and diversity of recreation activities; seasonality of principal uses; relation to markets for recreation demand; level of development of the area. On the other hand, it was judged unnecessary to make first-hand observation of well documented forms of recreation service, such as farm-related recreation enterprises or large-scale, chain-type motel-restaurant operation.

Nine areas were selected for study. These do not constitute a sample, in the formal technical sense, of the great variety of recreation "situations" that might be relevant to development of recreation in Appalachia (actually, any kind found in the United States except those based on the seashore or sub-tropical climate). Nevertheless, in the selection of case studies, consideration was given to the principal variables that distinguish one kind of recreation area from another, in order that the areas chosen could be considered "representative" in a nonstatistical sense of the principal kinds of situations. For this purpose, "areas" had to be sharply localized, since large regions, like "The Poconos" or "The Smokies" are too heterogeneous and too complex for detailed observation.

In this framework, 41 specific local recreation situations from all regions of the United States were recommended to the staff of the Commission as representative of kinds that might be relevant to recreation development in Appalachia. The staff selected seven of those and proposed two in addition.

The nine recreation areas examined, and the principal focus of each, were:

A. Capon Springs, West Virginia: a self-contained, private resort offering diverse recreation facilities beyond day-use range of urban centers.

B. Charles Town - Harpers Ferry, West Virginia: specialized recreation attractions -- public and private -- near urban centers.

C. Cherokee, North Carolina: cultural attractions including Indian Village, Museum and Pageant located adjacent to Great Smoky Mountain National Park.

D. Deep Creek Lake, Maryland: private water-oriented second home development accessible to three large metropolitan areas.

E. Gatlinburg, Tennessee: a recreation community remote from urban centers, nearby a major public mountain attraction.

F. Kentucky Dam Village State Park, Kentucky: a multiple recreation, water-oriented complex, publicly developed and operated.

G. Park City, Utah: winter sport-oriented community near a moderately large urban center overlaying a depressed mining economy.

H. Somerset, Pennsylvania: an interchange exit from a major transcontinental highway within day-use distance of an urban center in the heart of an established three-county recreation area.

I. Stratford, Ontario: cultural festival within an established community just beyond day-use range of major urban centers.

For each area selected, basic economic information reflecting socio-economic conditions, employment conditions, and pertinent locational features were assembled for the county in which the recreation complex was located. While this helped place the particular aspect of the recreation industry in historic and economic perspective, it should not be inferred that the case studies were or could attempt to trace through all recreation activity and its effect on the intricate interworkings of the total county economy.

Appropriate work sheets of desirable information to be obtained from primary enterprises, secondary enterprises, second home activities, community leaders and the complex itself were formulated as guides to field interviews and as an aid in organizing the data.

Contractor personnel who were to be engaged in the field work collectively undertook the Charles Town - Harpers Ferry investigation to test the guides and achieve a similarity of approach. Work at Charles Town - Harpers Ferry was completed in late June; the field work covering the other eight study areas was completed in July and August.

Statistical Analysis

The statistical analyses were of several types, but each was part of evolving a useful way to measure or anticipate recreation industry impacts. The first type was a broad-gauged examination of the effects of personal recreation expenditures traced to the direct and indirect transactions in the various sectors of the national economy and then compared with the effect of similar transactions on several Appalachian economies. The examination was made through use of data published as the 1958 Input-Output Analysis of the National Economy by the Office of Business Economics and through use of estimates developed in two Appalachian county input-output studies undertaken by Dr. Hays Gamble, as well as through the analysis by industrial sector of linkages from the local expenditure-income chain with respect to several Appalachian tourist complexes and their adjacent economic bases.

A second type of analysis involved the calculation, adjustment, and verification of county export employment multipliers. Basic multipliers were developed for each of 375 counties or special cities of Appalachia through application of location coefficients based on 32 census employment sectors developed by the Regional Economics Division, Office of Business Economics. These basic multipliers were then adjusted by distributing other portions of the county employment among other non-local service sectors. This distribution was based on the direct and indirect total output attributable to non-personal consumption expenditures derived from the 1958 Input-Output Study, reaggregated to conform with the Office of Business Economics' 32 sector format.

The adjusted multipliers were tested by comparing them with composite multiplier values derived from detailed input-output studies, incorporating household income effects, made for several Appalachian counties. The utility of the multiplier is two-fold: evaluating the direct and indirect employment emanating from present export employment, and approximating the direct and indirect employment which might arise with given new basic employment generated by proposed recreation complexes. The multiplicand in both cases is stated in terms of direct basic employment. The product of the multiplicand and the multiplier is the total employment impact.

The export employment multipliers for all counties, complete description and mathematical formulae used in deriving the adjusted multipliers, and the conditions under which the computed multipliers operate is found in Appendix C of this report.

The third type of analysis undertook to examine the heterogeneous data gathered in the case studies and previous research in order to describe the specific effects of recreation activities as distinct from the employment effects of other "export" activities. As already noted, the findings of other research efforts in the field and the case studies yielded information about direct employment attributable to a variety of recreation enterprises, ratios of resident and non-resident expenditures, amounts spent and approximate distribution of those expenditures between local and distant suppliers, wage rates, occupations of persons employed, staffing patterns, investment patterns, tax rates, and other matters of special interest. These data were tabulated for comparison and analysis. The findings of these statistical analyses concerned directly with the direct and indirect employment effects of different recreation complexes are found in Chapter III.

Development Impact

There are a number of special advantages and problems peculiar to the recreation industry particularly when considered in a development context. For the most part, these special development aspects are non-quantifiable, yet they may be of as great concern from the standpoint of public policy formulation as employment impact. One of the most obvious advantages of a well thought-out recreation development program is its effect on community development attitudes. On the other hand, the traditional sharp seasonal fluctuations in recreation employment poses serious development problems. Specific information and insights bearing on many of these issues were obtained from the case investigations, the literature, and from the experience of the project research staff. The special development effects of the recreation industry are discussed in Chapter IV with as much precision as the available information permits.

Policy Considerations

It is clear that consideration of recreation as an export industry activity deviates somewhat from the usual recreation study. These differences are reflected in the approach to public policy in this report.

Historically, recreation has been closely identified in the public mind with conservation of natural resources and conservation of human resources. In the first instance the existence of unique scenic, biological or cultural attributes constituted sufficient rationale for a reservation of land areas in public or quasi-public ownership. Protection of the unique characteristics is a dominant feature of management, regardless of the location of the resources. In the second instance, people residing in increasingly congested urban areas became the main focus. Open land, special facilities, and organized programs were developed to provide opportunities for these people for satisfying use of their increasing leisure time. The relationship of quantity and type of facility to user populations is a dominant consideration.

The result has been the emergence of a conception of recreation which associates a fairly well defined range of activities with the out-of-door where dominant concern and action is given over to the public sector. These attitudes have had a prevasive effect on the type of development and policies associated with development of other resources. Recreation studies have reflected needs associated with these concepts of recreation, with emphasis on the natural characteristics of an area, on the design of facilities that would minimize visual disturbsnce, and on the extent and quality of future use.

It was not until the initiation of benefit-cost analysis for water resource development projects that there was a conscious awareness of economic impact stemming from recreation visitation. Tremendous expansion in economic activity, e.g., highway and building construction were presented as contributions to the economic well-being. Persons associated with recreation imputed economic benefits, often intangible, to support the use of conservation areas for recreation purposes. Measures of gross expenditures made by recreationists and travelers became important subjects of economic research. In addition, distinctions between alternative resource developments required information concerning relative values which might arise from different investment patterns.

These efforts to deal with the problems of measuring recreation value contributed much to the understanding of recreation as a social and economic activity, but there was no real concern about the contribution that a particular activity or a facility development program would make in a particular geographic area. This study moves into that gap. There is no suggestion that is substitutes for other kinds of investigations into the economics of recreation. Each of them is useful in its own right for the purposes they are designed to fill. None of the economic studies fully substitutes for social judgments about the magnitude, location, ownership, or quality of recreation facilities or development. These social judgments are rightly the concern of policy-making groups. The data developed by this study should enhance the deliberations of policy-makers in evaluating courses of action when development is an explicitly stated public goal.

Thus it does not attempt to place monetary value on recreation experience or measure the willingness to pay for various recreation experiences of different consumer groups. It does not attempt to evaluate recreation enterprises against other kinds of economic activity in response to specific development problems. Finally, this study is not intended as a substitute for actual feasibility investigations where the locational factors of quality, access, markets, and alternative supply are fundamental to the development of investment strategies.

On the other hand, neither does it imply that recreation development can be justified only by its economic development impacts on local areas, even economically depressed areas. Public and private investment in recreation facilities can be justified insofar as they fill social needs and meet market demands. The policy considerations here are concerned with the marginal economic impact in local areas of a decision to invest public resources in recreation for its own sake.

Aspects of Special Interest

The literature search and field studies were also designed to develop information and examine specific problems of the recreation industry, such as sources of private investment, extension of the recreation season, tourist promotion, and the effects of policy changes with respect to the use of public lands. For the most part these special aspects have been treated within the main framework of the report. Where they have not been so treated, they are dealt with separately.

II. THE NATURE OF THE RECREATION INDUSTRY

The recreation industry has two fundamental characteristics: first, it is mainly resource-based; and second, its enterprises are mainly trades and services. The nature of the industry and its impact are largely shaped by these characteristics.

Recreation as a Resource Industry

The character of recreation as a resource-based industry is fundamental to the industry and its impact. When we speak of "resource" in this context, we include not only physical or topographical characteristics, but equally, climate, historic, archeological, or cultural significance, and -- importantly -- location; in short, the qualities of a place that attract recreation-bound tourists to leave their home communities to visit it. The basic resource can be natural (like the Great Smokies), or cultural (like Stratford), or a combination of the two (like Cherokee). Its attractiveness may derive from its unique qualities (like Mesa Verde), or from its proximity to large populations (like Tocks Island), or both (like Disneyland). But in any case, all non-metropolitan recreation areas, such as those covered by this study, have two characteristics in common with other resource-based industries: their economic value depends on the degree and manner in which they are exploited; and since they are fixed in location, they can be exploited successfully only if they are made accessible.

In the recreation industry, as in other resource industries, the resource needs to be developed for exploitation. And the development of the resources requires a heavy capital investment, for example, in roads and water works and, of course, in tourist-serving facilities. Unlike some other resource industries, the development or improvement of resources for recreation often are multi-purpose; for example, dams are built for flood control, power generation, as well as for recreation use; highways that make recreation sites accessible usually serve general transportation purposes as well.

Inherently, resource industry development is restricted in its location; sites are limited and the relative quality of sites varies. Location is perhaps of greater significance to the recreation industry than to other resource industries, since they depend on large numbers of individual users. With location, another common aspect of resource industries is access; however, good mass access is of greater importance for recreation development than for other resource industry development.

There are several peculiar aspects of the recreation industry of particular relevance to this study.

1. The "product" of the industry, though it is an "export," must be consumed in the local area. The accessibility to large populations derives from this characteristic. It is extremely important in Appalachia, situated as it is between the eastern megalopolis and the heavily populated Middle West.

The on-site production and consumption of recreation has further significance for Appalachia. Two alternative methods of dealing with unemployed and underemployed people are available, and their comparative merits are often debated. Either jobs are created where the unemployed live or the unemployed are moved to existing job opportunities. The movement to the job opportunities is usually a natural one for those workers with adequate skills or sufficient initiative to acquire the skills. For the unskilled or semi-skilled there are many problems of retraining and resettlement. Because of its particular characteristic in bringing the customer to the industry, recreation offers special opportunities to bring work to the unemployed. By and large, the unemployed labor force in the rural areas has limited skills and is less mobile to move to jobs elsewhere. It happens to be this type of labor force which constitutes the bulk of the recreation industry's labor needs.

2. While the customers must go to the industry, they choose their own time. As a result, the demands on the services of the industry are very uneven, as between months of the year, days of the week, and even hours of the day. But of course, the output of the industry cannot be stocked or stored. Seasonality and other irregularities of demand in the recreation industry mean fluctuations in the demand for labor, supplies, and an under-utilization of fixed plant. Hence, investment cannot be fully exploited.

The fluctuations derive from the nature of recreation as leisure-time activity and are thus opposite to the schedule of work and school, with seasonal peaks in July and August, and a weekly peak at the weekend. Some recreation enterprises close altogether in the off-season. But recent trends have enlarged the possibilities for lengthening the season and building up the off-season. Vacations are growing longer and the work-week shorter. Higher incomes have brought winter vacations within reach of more people. More people are retiring, younger, and therefore able to travel out of season. The growing popularity of skiing has spread from upper to middle class and from north to south. Good highways have made possible weekending year-round. Cultural events, trade fairs, and business and professional meetings bring tourists to take advantage of off-season rates in recreation areas. These trends will continue to work toward mitigating seasonality, but tourist recreation will still remain a seasonal industry.

3. Employment in recreation compares unfavorably with employment in other resource-based industries. Except for management, skill requirements, productivity, and value added are low for most jobs. Consequently, the wage scales are low; in fact, they are among the lowest. Further, recreation has more job opportunities for women and this has serious consequences on the employment structures of those communities where recreation is a major component of the economy. Finally, due to the seasonality of the industry, much of the employment offered is more in the nature of supplemental rather than staple employment.

4. The ups and downs of the national economy affect nearly all economic activity, but the effects are more immediate and more pronounced in recreation than in other consumer industries. The same income-elasticity that has led to growth of demand as incomes have risen, makes vacations and all forms of recreation expenditures sensitive to recession. These expenditures are among the first to be cut back in the family budget when incomes drop. Another uncertainty is the weather. The effects on the industry of a "poor" summer or winter can be quite drastic. And successive seasons of "unseasonal" weather cause extended unemployment and a serious drain on entrepreneurs' capital.

The effect of the uncertainties of the industry is reflected in its ability to attract investment funds from conventional sources. Because returns on investment are uncertain and often low, it is difficult to raise long-term loans in the industry. The absence of or restrictions on long-term investment funds may prevent a more rapid growth of the industry in many places.

5. It appears that recreation is more susceptible to public policies than other resource industries. The natural resource of the industry rests on the unique or spectacular scenic quality of the landscape or on major constructions such as dams and access. Both the preservation of the landscape and construction of major works, more often than not, can be achieved only through public actions. The way in which preservation areas are chosen, the construction of works carried out, access provided, development of related activities controlled, affect the location and development of the recreation industry in many parts of the country. This, of course, is not true for the whole industry. Many recreation complexes, large and small, situated in attractive settings have been established and are operating without any major public actions or investments. With the ever-increasing demand for outdoor recreation there is certain to be an increase in public action, if only to preserve the countryside.

Recreation as a Service and Trade Industry

The enterprises which serve the demands of recreation tourists are found almost entirely in the service and trade sectors of the economy. In general, more than half of tourist expenditures are for the purchase of food and lodging alone. Consequently, recreation as an industry shares the common characteristics of services and trade: many enterprises, mainly small, widely diffused; with relatively small capital requirements and relative ease of entry; with relatively low value added, low productivity, and low wages. These are the characteristics, in fact, which mainly determine the direct, initial impact of recreational tourism on the local economy.

As in many other kinds of small business, family enterprises are very common in the recreation industries. The capital is often privately raised from personal resources. Much of the labor, as well as management, is contributed by the proprietor and his family. Because of seasonal and other fluctuations, the business may be supplementary, or seasonally complementary, to other occupation and income in employment or farming.

The nature of recreation as a resource-based industry, noted above, superimposes certain risks on the normal risks of small trade and service enterprises. The attractions of a recreation area bring the traffic on which such enterprises thrive, and it is growing. By the same token, the competition among recreation areas, as well as chance factors like location or relocation of highways, generate characteristic risks. Similarly, recreation-serving enterprises are exposed to both the benefits and the hazards of the recreation seasons and the weather. Because their prospects are bound up with so many such factors, they can be the beneficiaries or victims of circumstances beyond their control. They are exposed to short-run hazards, but long-run trends of growth of the industry are working in their favor.

What Determines Impact

Four factors mainly determine the economic impact of recreation on a local area: (1) the recreational resource and its attractiveness; (2) the volume of visitors; (3) the intensity of expenditure; and (4) the degree to which the expenditures become income to the local area.

The Nature of the Recreation Resource. Every recreation resource is a unique combination of location, setting, and attraction. The "gravity model" is applicable to the attractiveness of recreation resources as it is to commercial facilities. In general, the ability of a recreation resource to attract visitors is directly proportional to the desirability and appeal of the recreation activities and facilities, and inversely proportional to its distance from the population centers from which the visitors come. Some recreation areas thrive by virtue of their proximity to large population centers even though the quality of the recreation resources is not extraordinary. The expected heavy use of the proposed Tocks Island National Recreation Area derives less from the quality of the resource than from its location close to the New York-New Jersey metropolitan region. At the other extreme, there are recreation resources of such rare quality that their attractive power spans the whole continent. Yellowstone National Park, the Grand Canyon, and Disneyland are examples. Between the extremes there are combinations of proximity and quality. A large reservoir in the east will have greater attraction than one in the west, both because large reservoirs are less common in the east and because large populations are close by. Mountains that would pass unnoticed in the west are major attractions in the east -- the Poconos, for example, whose growth and development are attributable more to their location and access than to any extraordinary natural features of their environment. The attractiveness of the recreation resources will thus vary from place to place in its mix of rarity, location, and access, but in varying degrees all three will play a part in the ability of the recreation area to capture visitors.

In recreation, as in all competitive service and trade industries, the optimum locations are where specialists congregate. Examples of recreation complexes are the Poconos, the Adirondacks, and the Catskills. This factor is enforced by the growth of the tourist-vacationer who prefers to choose a wider region with a series of recreation facilities. The implication for the most succussful future growth of the industry (in terms of expanding investment and employment) is to think in terms of complexes or systems of recreation development and not in terms of isolated and unrelated developments.

Vacation homes are a special and relatively high impact factor of the recreation industry, most affected by quality and location of the area. Vacation home development relies heavily on natural resources and on nearness to population centers. Vacation homes and their use as permanent residences are rapidly increasing in numbers, encouraged by rising incomes, increased leisure time, acceptance of commuting, lower cost of housing in rural areas, and advance planning for retirement. As a development factor, vacation home development shows several advantages. In strict economic terms, vacation homes add to the effective spending power and they make a substantial contribution to the tax base. Vacation homes also bring a new quality to rural areas in the form of urban population which demands more advanced services and skills. While the areas of natural beauty near the urban centers are capable of capturing the vacation home development which produces lasting impact, this development raises several public control issues. The pressure of this type of development requires public policies and conditions to prevent conflict between vacation home development and general recreation development, as well as conflict between vacation home development and the preservation of the general recreation area.

Volume of Visitors. The second factor follows from the first. The demand for recreation, growing as it is, tends to vent itself on recreation resources within a relatively short time-distance and with relative good access even where the quality of resource is not extraordinary. The Yellowstone, for all its wonders, does not attract as many people as the Great Smokies, simply because the latter is within relatively easy access of half or more of the population of the country. As a general rule, a very large fraction -- half or more -- of the visitors to almost any recreation area originate in the state in which it is situated or in the adjacent states. Generally this represents a two-hour driving time radius. In the case of resources situated close to large metropolitan populations, the fraction approaches 100 percent.

The volume of visitors can be increased if the range of facilities is increased. The vacationist and particularly the tourist-vacationist seeks diversion. He wishes to see and do many things. This is not to say that all vacationers are equal: they have different tastes and seek different diversions. Nevertheless, each type of vacationer wants variety. Other things being equal, the recreation area with a greater variety of complementary facilities will attract a greater number of visitors. And depending on the type of facilities, visitors may be attracted over a longer season.

In connection with the volume of visitors and their expenditures, it is important to consider the attractiveness of facilities in terms other than their direct financial return. There are some facilities, such as a dam which creates a lake, which may not themselves directly produce any returns but which bring visitors who may spend on other facilities. Other types of facilities, such as a theatre, may not produce substantial direct income, in fact, may actually run at a loss, but they also bring visitors who might otherwise not be attracted at all. Historic sites, even though they are less effective in holding a visitor for any length of time, are capable of drawing a very large number of visitors. Here is another case where the impact on an area can be increased through a systematic approach in recreation planning. Historic sites, which are fixed, need to be related to other recreation developments whereby the historic attraction serves to bring the volume of visitors, and other recreation facilities keep them in the area.

Visitors' Expenditures. The magnitude of expenditures by visitors is the third element and the most critical. "The mere presence of a recreationist in an area does not mean that he is helping the local economy. To create an impact the visitor must also spend while there."[1] And the magnitude of expenditure is less dependent upon the nature of the original attraction, and the absolute volume of visitors than on the duration of their stay and the number and variety of opportunities for spending. The effects of variety in things to do, see, and buy is cumulative. The longer a visitor stays in an area, the more services he will require. The more services and goods he is offered in an area, the more he is likely to buy. And in addition, the more services and goods he is able to purchase in an area, the longer he is likely to stay.

This is a cycle in which location again plays a significant part. If the drawing power of the attraction is not sufficient to bring in any but day users, the services they require are few and their expenditures will be small. If an exceptional service is offered, such as a fine restaurant, some visitors may be induced to stay longer. But there is a limit to the amount of service industry which can be built on day use, and the impact in relation to the volume of visitors is small. Where the attraction draws visitors from farther away, and it becomes necessary for them to spend a night in the area in order to enjoy its resources, opportunities for recreation industry proliferate. The impact will be a function of the variety of things to do which keep the visitor there and the number of things he can find to spend money on. The distinctive character of the recreation area, as well as its location and the attraction it affords also becomes vital. The place to spend a vacation as against a place is a matter of promotion, mix, and quality of facilities and services as well as the recreation opportunities. The rarer the attraction, the less dependent upon location to attract visitors; but the more remote the location, the higher the proportion of visitors' expenditures made en route, and the less available for expenditure in the area. The benefits to the area of a particularly striking attraction can thus be partly offset by the cost of travel to reach it, and by the limits on the number of times a visitor is willing or able to make this necessary outlay.

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[1] Ronald Bird, Water - Its Recreational Use as Economic Factors in Regional Development. U.S. Department of Agriculture, Economic Research Service.

Recreation expenditure goes into three sectors: (1) into services such as hotels and entertainment, (2) into the trade sector through the purchases of goods, and (3) to some extent into land and buildings in the form of capital investment. Within each sector the effect on the given economy differs. The most direct employment effect is felt in the service industries insofar as the services are locally provided. Such facilities as motels, restaurants, entertainment, and sports events have the most direct employment effect. They are the labor-intensive recreation establishments. It is important to realize that all of these facilities are complementary; they offer additional recreation activities which tend to lengthen the stay of visitors and which increase their spending.

Visitor expenditure also goes directly and indirectly to the purchase of goods, thus affecting both retail and wholesale trade. To the extent to which the trade sector locally manages to supply the goods, it will have further employment effect. Depending on the nature of the local economy, the supply of goods may also be partially satisfied from local manufacturing establishments, again offering further job opportunities.

Capital investment in land and buildings for the construction of recreation facilities and for the building of vacation homes directly effects the community's tax base and may give local employment to the construction industry.

Aside from the creation of employment opportunities, service and trade establishment, and the sale of land provide opportunities for the local creation of capital. Where the income derived from recreation enterprises is marginal or supplementary, as for example, in farm recreation enterprises, it is unlikely that they will stimulate investment. If, however, there is a substantial recreation investment with an adequate return on the investment, the returns will generate new capital for re-investment.

In this context it may be useful to discuss two general misconceptions. One concerns the income of visitors and the other the impact of campers. Great emphasis is often placed in recreation studies on the importance of attracting high-income visitors. It is assumed that the greater the family income the higher will be the expenditure. While there have been no systematic studies on this point, interviews with a number of recreation establishment operators indicated that there is little correlation between income and amount of expenditure while on vacation. Total annual expenditure by high-income families may well be greater, but family income is no guide to the per day expenditure in a given recreation area.

As far as campers in tents or trailers are concerned, it is generally held that their impact is minimal because they spend little on accommodation. Campers, however, are intense visitors who stay for two or more days and, therefore, use the recreation services offered and do their purchasing in the area. The expenditures of one family camping for seven days may, therefore, be greater than the expenditures of seven families staying for one day only. Campers even stay at motels. "He (a motel owner) estimated that they would have nine out of ten campers in a motel by the end of the week."1/

An awareness of the differential effects of recreation facilities implies that development and investment efforts, both public and private, need to strike a balance between those facilities which bring volumes of visitors and other facilities of a labor-intensive nature which create employment and capital. The implications in the sphere of public control are that public investments should be geared to multi-purpose recreation use and should provide opportunities for private investment. Where heavy public investments are made, either in the purchase of land for preservation or for public works with recreation potential, commercial recreation and private development should be made part of the overall development concept.

Retention of Income. The ability of the recreation area to retain the revenues arising from recreation expenditures as net income will determine the contribution of the expenditures to the economic base.

The basis for measuring total impact rests on an examination of recreation as an export activity. This means

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1/ Ibid.

that the magnitude of local economic effect of recreation expenditure depends on the community's ability to supply the visitors' demands for goods and services locally and from local sources. To the extent that goods and services are "imported," money "leaks out" and therefore does not generate production of goods and services to provide employment and income to benefit the community.

There are several reasons why an area may not produce all of the goods and may supply only some of the services purchased by visitors. This usually is the case where the community is small, with a limited range of commercial and industrial establishments. But even in larger communities, many of the service, trade, and manufacturing establishments which could supply visitors' needs are absent.

The community's ability to capitalize on visitors' expenditure springs from the local labor force and the presence or absence of trade and service establishments. This explains why the recreation industry's impact relates more to the economic base of an area and less to the nature of the recreation complex. Or to put it another way, effective demand has no local effect if there is no local supply. If there is an inadequate labor force from which to recruit or if the labor force lacks the required skills, it is difficult to establish the kinds of facilities which cater to visitors' needs. And if the required labor and labor skills are imported for the season, the local impact will be less effective than if the labor were local, because the seasonal in-migrating force will tend to spend much of its income in its home town away from the recreation area.

Whatever the reason, the absence of service, trade, and manufacturing establishments means that part of visitors' expenditures in the area "escape" and have their impact elsewhere. While motels and restaurants employ people, the goods and services needed by these establishments may be obtained outside the area. In most recreation areas there is a sizable demand for goods by the recreation establishments and by visitors. Yet the local shops may fail to benefit from this demand because of the limited variety and small scale of the local retail trade. By the same token, if retail business is small, there is no room for wholesale trade.

With few exceptions (such as fresh produce and dairy products, special processed food items; handicrafts; and occasionally mill outlets of local factories) the goods sold in the recreation area are not produced locally. The larger the town and the more diversified its economy, the greater the opportunity to produce those goods and benefit directly from the visitors' expenditures.

This raises the question -- where does the money flow to? Given a substantial recreation expenditure, the impact must be somewhere. Generally, the benefits flow to the nearest towns which can supply the goods and services. It is a question, therefore, of location, access, and the nature of the surrounding economies. Often the nearest economy capable of supplying the required goods is a metropolitan area.

Recreation Investment and the Scale of Recreation Business

Difficulties in raising capital and shortages of reinvestment capital tend to hinder the establishment of new recreation enterprises and slow down the expansion of existing ones in areas of growing demand for their services. Investment in the industry presents certain characteristic risks due to the seasonality and dependence on the weather, and does not, therefore, attract investors easily. But the small scale of recreation enterprises is responsible in large measure for borrowing difficulties and the inability of existing enterprises to accumulate capital rapidly enough to meet the expanding demand.

The smallness of recreation establishments, in terms of employment and investment, is well documented. The last Census of Business taken in 1963 reveals the small average employment among the several types of service establishments. (See Appendix Table B-1) A more recent study of private outdoor recreation enterprises[1] shows that they are predominantly small. Only 5.6 percent of all enterprises employ five or more persons year-round, and even during the peak of the season no more than 15.4 percent have five or more employees. Over three-fourths of the establishments have no year-round full-time employees, and during the season well over half manage to run their businesses without full-time help. These national figures tend to be on the low side because the study includes enterprises which provide supplementary incomes. The Chilton Study also shows that median capital investment for full income enterprises is about $64,000 and only $8,000 for supplementary income enterprises.

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[1] Private Sector Study of Outdoor Recreation Enterprises, prepared by Chilton Research Services, Philadelphia, Pa., 1966 for the Bureau of Outdoor Recreation.

While capital requirements are relatively small, the accumulation of funds presents difficulties. A very small business usually does not produce a large enough return from which substantial savings can be made, and many small business entrepreneurs consider all earnings as income to the entrepreneur and fail to set aside funds for expansion. Short-term loans for the operation of their business are relatively easy to obtain from lending institutions, but needed long-term loans are hard to raise. Most of the borrowed funds come from individuals or from new partners. Despite the fact then that capital accumulation is slow, the borrowing difficulties force entrepreneurs to rely mainly on their own resources. A study of the vacation industry in Maine found that 75 percent of the expansion funds came from savings or retained earnings.

One of the economic side-effects of a growing recreation area tends to assist investment. Rising land values permit proprietors who own land either to raise funds by selling the land or to get a loan on the strength of the appreciated land value. A small proportion of the loans are made by local banks but in some states legal restrictions limit the lending capacity of the banks. For example, West Virginia's state laws prohibit branch banks; therefore, the banks in small towns can only draw on limited funds.

Considering all these private investment difficulties, it is surprising to find that so little is known in recreation areas about public investment assistance. Neither the entrepreneurs nor the lending institutions seem to be familiar with SBA loans, or where the area qualifies, with EDA loans.

A fairly recent method of private investment assistance in the recreation field is the franchise system whereby national concerns provide part of the capital and the remainder is raised by loan on the strength of the franchise. So far, the franchise system affects mainly the larger motel and restaurant businesses, but there are also franchised chains of roadside stands and it is conceivable that the spread of this mode of financing and operation may attract capital and realize some of the economies of large scale in the industry.[1]

Public Policy and Economic Impact

Because so large a part of the resources for outdoor recreation are based on public expenditures and public programs, the relationship of public policies to recreation impact must be examined. Whether a recreation resource is created as a by-product of some other purpose, such as flood control, navigation, or transportation; whether it is provided by the public sector for recreation as a public service; or whether it is related to a publicly assumed responsibility to preserve areas of great natural significance or spots of rare historical interest, the economic impact of the recreation industry which ensues or may ensue can never provide the sole or even the major justification for the investment. Thus, the economic impact which arises from a public recreation resource is essentially an incidental or incremental benefit. Public policies can be evaluated as they affect impact only within the context of broader public purposes. The dominant purposes or purposes for which the resource was created will, therefore, dictate many and perhaps most of the kinds of investment which will be made in and for it, and the recreational uses to which it can be put.

Access as it Affects Impact

If economic impact is dependent initially upon the drawing power of an area's attraction, this, in turn, is dependent upon the access provided to it and permitted within it. Public investment in recreation will, at a minimum, open a resource formerly inaccessible to public use or access. Associated with this are the provisions made for reaching the resource which may be the responsibility of some other level of Government or some other Government agency at the same level. In any case, the quality and capacity of the approach roads to a recreation area will affect the level of visitation and hence the possibilities for impact effects.

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[1] For a more extensive discussion of franchising and its effects, see The Outlook for Small Business, a study for the Small Business Administration by Robert R. Nathan Associates.

Control of access to recreational resources raises questions concerning the intensity of use which can be permitted without overloading or damaging the resource, or which is compatible with its other uses. Great Smoky Mountain National Park was created to preserve this prime section of the Appalachian Mountains for recreational use, but use is restricted by the limited access roads within it. There is controversy as to whether an additional road would damage the conservation purposes; but few would deny that the present access is now over-used or that improved access on the eastern side of the park would bring additional economic impact to communities at the approach points. Another aspect of this type of access is related to the intensity of uses. A lake, no matter how beautiful its setting, and regardless of whether it is natural or man-made, will be more of an attraction if it can be fished rather than merely viewed; the addition of boating, swimming, water-skiing, etc. will progressively enhance its attractiveness. If impact is to be maximized, the greatest number of permitted uses will afford the greatest drawing power. But this raises questions of the capacity of the resource in various uses and of conflicts among them.

Land acquisition policies affect impact, primarily as they affect access and permitted uses. TVA acquired shoreline on some of its reservoirs only to meet foreseen needs -- among which was recreation. By including in this category most of the principal access points, they could control and direct the use of the resource. In doing this, they were motivated primarily by the desire to assure public access at the places where it was most easily obtained and most likely to be wanted (in relation to the Valley populations). Some of these lands were held in reserve for state and local agencies until they were ready to develop them. Others were disposed of to commercial operators -- but only for approved uses and at a specified standard of development. This may have, in fact, curtailed impact since a relatively high investment was required to meet TVA development standards. But this was a policy designed to protect the character of the resource rather than to generate economic activity.

Closely related to permitted uses are the improvements to facilitate use; stables and trails for riding; swimming docks, beaches, and changing rooms; boat launching ramps and marinas; liveries for fishing boats and equipment. The number of facilities for recreation and their quality will, up to a point, determine the level of visitation and the magnitude of jobs created. This is true whether the facilities are built and operated by the public or the private sector. The policy decision, as it affects impact, is then what facilities should be provided, not what sector shall provide the investment. Kentucky Dam Village illustrates this point. Given the resort facilities which were developed there, and their availability to transient and day-use visitors, the employment generated by their construction and operation was of the same magnitude in state ownership and operation as if the development had been private.

Facilities for recreation are not invariably profit-producing, and those which cannot be exploited commercially are uniquely suited to public investment. This would include campgrounds, hiking trails, picnic tables, etc. There are others which entail a large original investment which cannot be raised locally from private sources but which will be established by the Government or a non-profit foundation with Government assistance simply as an enhancement which will bring associated private facilities to the area. This is particularly true of the cultural attractions at Stratford and Cherokee which run at a loss but attract and hold customers for the restaurants, motels, and other visitor-serving enterprises. If public concern is primarily to generate impact by public investment, its role in providing facilities to draw and hold the visitor through both their variety and quality is important. The employment generated by public golf courses, pools, and beaches, as well as cultural events, is significant. The base which the attraction provides for associated enterprises, whether publicly or privately financed, will determine the magnitude of further impact.

Harpers Ferry is a case in point. The attraction of the historical monument is great, but apart from the Federal employment at the park itself, the impact has been small. The shops and renovated hotel are deriving little benefit from the heavy visitation, largely because there is not enough to hold visitors for more than an hour or two, although many come from far away. If the Government chose to develop some of its land holdings into campgrounds, and provide a place to swim, out-of-area visitors would be induced to stay longer and patronize the commercial facilities more.

Public Policy and Investment Capital

In recent years there has been a new role for public investment in the financing of commercial recreation facilities to generate employment in areas of high unemployment. At Park City, Utah a large loan from the Area Redevelopment Administration was used in conjunction with private funds to establish ski facilities and accommodations for skiers. As a result, many enterprises have been started to serve the visitors attracted by the winter sports facility, and existing firms have geared themselves to exploit this new market. The town has shown an upswing in population and employment, a good part of which can be attributed to this activity. Without this Government assistance, it is most unlikely that the recreation potential of the area could have been developed. But there is also a question as to whether the attraction and the associated enterprises can subsist on what is essentially a winter use only. This raises a difficult policy question with respect to what further can or should be done with public funds to raise visitor levels at other times of the year. An impoundment to create water-based recreation in the summer would, in fact, augment impact. But the cost to the public of such an impoundment cannot be justified on the basis of the economic impact alone. However, if other public considerations, such as the need for water-based recreation, dictate the creation of a reservoir in this area, it should be so located, all else being equal, so as to reinforce the existing recreation industry.

Considering the quality and the magnitude of recreation impact which results from a single attraction, it appears that the financing of a recreation facility in depressed areas in isolation from other developments is questionable. But the financing of a project which will add a vital element to an established or emerging complex might indeed be justified. Another ARA loan for a ski facility illustrates this point. Camelback in the Poconos was financed largely by ARA and resulted in a winter draw which enabled perhaps 30 establishments, formerly closed in the winter, to remain open an additional 3 months. The incremental benefit was, in this case, very large and the role of low-cost, long-term financing, not otherwise obtainable, was an essential factor.

Recreation Promotion

Recreation promotion, narrowly defined, means "advertising" to inform potential visitors of existing recreation facilities in the hope of increasing the volume of visitors. Viewed in a broader sense, promotion means the conscious provision and exploitation of new and better facilities to capture the growing and diverse demands of visitors.

Much is known about various forms of recreation advertising but the literature is silent on the effectiveness of advertising, and the case studies did not reveal any quantitative measurements of the relative merits of various kinds of advertising. The organization and financing of tourist advertising has often been described as a pyramid. At the apex is a state-wide program, generally supported at the state level but often financed by major industries -- as in the case of Southern Bell Telephone Company which serves a multi-state region. The objective of such advertising is to establish an identity and create an image for the state or major region. Below that is the promotion of smaller companies, several chambers of commerce, individual businessmen, and government entities within the region. The objective of their publicity is to further define the area and its special attractions. At the next level is the local group advertising effort of businessmen at a particular resort area who provide complete information about the total range of recreation opportunities available in the area represented by the group. Finally, at the base of the pyramid is advertising conducted by individual concerns. The focus of such advertising is not so much to influence prior decisions as it is to inform and attract the visitor who is attempting to decide on accommodations once he has arrived in a given region.

These efforts are not mutually exclusive. If well integrated they add up to increased visitation to a particular recreation attraction. Increasing numbers of recreation travelers carefully schedule their trips and decide well in advance of departure from their homes the exact points of interest they expect to visit at specific times during their trip. One need only look at the operating experience of Holiday Inn, Inc. and the percentage of total guests who register at franchised establishments as the result of the holidex advanced reservation system. During the opening summer months the Somerset Holiday Inn enjoyed 80 percent of its daily occupancy from advanced reservations made through holidex. In addition, empirical research has indicated that there is a direct relationship between the flexibility of a traveler's itinerary and the distance he travels from home. People traveling long distances are more influenced by regional and state information than those residing closer to the recreation area who will be more subject to group and individual promotion.

One objective of all tourist promotion is to assure that the prospective traveler has information about all the recreation opportunities available. A surprising number of them will travel to out-of-the-way and unlikely spots if these are not too far from home and if they are made aware of these places and of reasons for visiting them. A visitor information booth which can advise the visitor about the availability of accommodations, the range and location of the accommodations and the rates -- even providing a reservation service -- seems to be an effective tourist service which contributes to general promotion activity.

One advertising device directed specifically at strengthening the regional advertising capability was noted. The program originated in Pennsylvania and has been adopted by Kentucky. The state advertising agency allocates a portion of its budget to region-wide promotion organizations. If a regional organization is representative of the tourism-recreation industries in the region, the state agency matches regional funds on a dollar for dollar basis. In both states, businessmen, community leaders, and state officials commented favorably on this program and in one of the case areas with no comparable state program the desire for establishment of such programs was expressed.

Promotion as a tool for recreation development has been successfully applied in several case study areas where entrepreneurs and community leaders have been sensitive to new visitor demands. Either a wider range of facilities has been provided to offer peak season visitors a greater diversity of entertainments, or specific facilities have been added for off-peak visitors. For example, golf courses at Gatlinburg, Park City, and Kentucky Dam Village, drama and pageants at Stratford, Cherokee, and Park City; production and sale of quality arts and crafts at Cherokee and Gatlinburg; art shows at Harpers Ferry; restaurants and bars of special appeal at Park City; historically oriented commercial entertainments at Gatlinburg and Park City; all of these add to the basic recreation activities of these areas and intensify the holding power.

Examples of seizing the opportunity to attract the spring and fall visitors are illustrated by the addition of conference facilities at Capon Springs and Gatlinburg, fairs and festivals at most recreation areas, and high quality accommodation and restaurants for the wealthier off-season tourists. Ski developments, where feasible, are of course prime examples of promoting an area for year-round use.

Another example of effective promotion has been observed in vacation home development. Conventional real estate practices have been adapted to the special needs and requirements of second home owners. In the form of club developments, as at Charles Town and Harpers Ferry, the vacation home owner is offered attractive sites in combination with recreation facilities such as lakes and golf courses; local construction firms are able to build and maintain the homes; and financing is readily arranged. The rate of vacation home development in an area like Charles Town appears to be directly related to the degree of "promotion," i.e., to the comprehensive nature of the organization of vacation home real estate development.

The experience of successful promotion of recreation facilities, as well as our field studies, suggest that the most effective promotion is through what might be termed "institutionalization" of the resource or the facilities. By this we mean the projection of an image of the resource (for example, "The Smokies" or "The TVA Lakes") or the facility (for example, Capon Springs), by means of which a recreation situation takes on a character, becomes known by reputation, and attracts visitors on that account among people to whom it appeals. This is true not only of places but of specific tourist facilities (for example, Holiday Inn or Howard Johnsons), or attractions (the Cherokee Pageant or the Stratford Theater). The reputation may be national or regional, or in some cases, local, attracting its following from visitors to a specific recreation situation. In any case, the reputation rests on the quality of the facility or attraction, and the quality is the basis of the promotion -- principally through institutional publicity such as travel magazines, newspaper travel supplements, and word-of-mouth advertising.

III. LOCAL ECONOMIC EFFECTS OF TOURIST RECREATION

Direct Effects

Like other "exports," expenditures for tourist recreation generate employment and income, stimulate investment, and augment local tax revenues in the area where the export originates. The size of the impact, and the specific forms and effects reflect the **nature** of the expenditures.

The impact of recreation on a local economy derives, in the first instance, as we have said, from the volume of visitors' expenditures. Earlier studies have shown (and this one confirms) that these tend to be concentrated on certain well defined sectors of the economy, notably those providing food and lodging away from home, as the following table from selected state studies illustrates.

It is evident that expenditures per day vary, according to the nature of visitor activity; for example, skiing and racetracks induce relatively high spending. Food and lodging absorb most of the expenditures, except where camping substitutes for lodging, or where (as in New Mexico) long distance travel raises the expenditure for transportation.

Nevertheless, where annual visitors are counted in the millions and their expenditures in the hundreds of millions, the man-years to service them are counted in thousands.

The concentration on food, lodging, and amusements largely defines the local impact of tourist recreation. These are, for the most part, small sectors of the economy. In West Virginia, for example, these three sectors, while they accounted for more than $150 million of business (local and "export"), occupied, in all, about 20,000 people, (including 4,000 proprietors) in a total labor force of 590,000. Moreover, these were sectors of small establishments and low earnings. The earnings reported for Social Security contributions in these sectors were about half the average, and even allowing for under-reporting of tips,[1] they were far lower

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[1] In reporting for Social Security contributions, employers are required to include as earnings the estimated value of tips.

TABLE 1

VISITOR EXPENDITURES

Selected Surveys

Location	Activity	Date	Total Exp. Per Day Per Person	Percentage Distribution			
				Food	Lodging	Trans.	Other
Maine	Tourists	1959	n.a.	32.4	37.0	7.8	22.8
South Dakota	Water Recre.	1959	1.70	51.0	10.0[1]	15.0	24.0
New Mexico	General Recre.[2]	1962	6.12	18.0	5.0	43.0	34.0
	Fishermen	1962	7.22	31.0	0.7	40.0	28.3
	Racetrack	1962	16.75	15.0	25.0	44.0	16.0
Vermont	Skiing	1960-61	16.97	21.2	27.2	10.4	41.2[3]
Missouri, Ozarks	Tourists	1958	n.a.	27.0	21.0	22.0	30.0
	Tourists	1959	n.a.	25.0	19.0	28.0	28.0
Great Smoky Mt. National Park	Without Lodging	1956	1.82	36.3	----	40.1	23.6
	With Lodging	1956	6.32	34.2	32.4	11.4	22.0
	Average	1956	4.66	35.2	27.2	14.4	23.2
Alabama	Interstate Tourists	1961	4.50	33.5	17.0	25.7	13.8
North Carolina	Out-of-state Tourists	1962	n.a.	28.0	20.3	28.5	23.2

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[1] 60% campers.

[2] Campers and picnickers; expenses include 10% depreciation on equipment.

[3] 27.9 - ski lifts.

Source: See bibliography - Appendix A.

than earnings in other sectors. This is true of relatively high-wage states and relatively low-wage states both, as the tables for Pennsylvania, West Virginia, and Tennessee demonstrate.

Where unemployment and underemployment are high, as in West Virginia, it is precisely the labor markets for services and trades, with their relatively undemanding skill requirements, in which the depressing effects on wages are likely to be most severely felt. It is not in mining, construction, or manufacturing that West Virginia earnings compare unfavorably with Pennsylvania, but in eating and drinking places, hotels and motels, and amusements. The same can be seen in the depressed counties within Pennsylvania, compared to the more prosperous ones.

Nevertheless, in a given area, especially one with relatively small production for export, the impact of a vigorous tourist trade may be appreciable. In a small, narrowly based economy, the 100-125 jobs that might result from $1,000,000 of visitors' recreation expenditures could be significant: in an area like Gatlinburg, with perhaps 3,500,000 visitor-days, the $20,000,000 or so of their expenditures provides most of the town's 2,000 - 3,000 jobs. In Charles Town, West Virginia, the racetrack with its high expenditure per visitor (even though they do not spend the night) is one of the principal sources of employment and income.

The recreation industry is not uniform, and different modes of spending produce varying impacts on employment per dollar spent. There is, in fact, a wide range in the direct employment effect of different recreation enterprises, some are more intense in their use of labor than others. Depending on size and quality, a motel may offer between 70 and 160 man-years of employment per $1,000,000 of receipts. Restaurants and refreshment places produce a slightly lower number of jobs per million dollars of visitors' expenditure. In amusement and tourist attractions, the labor intensity measured by expenditure varies considerably and no clear pattern can be established. For example, in Charles Town the motels and restaurants together provide no more than about 90 man-years of labor, whereas the two racetracks offer over 800 man-years of employment. Again, within a given class of labor-intensive enterprise, higher quality establishments tend to be more labor-intensive, but there is no precise relationship between the cost of the service and the labor intensity.

TABLE 2

EMPLOYMENT, EARNINGS PER EMPLOYEE, AND NUMBER OF REPORTING UNITS FOR THE FIRST QUARTER, 1964

Pennsylvania

	Reporting Units				
	Total	Under 4 Employees	Under 20 Employees	Employees	Quarterly earnings per employee
All Industries	195,183	108,781	173,793	3,072,910	$ 1,232
Mining	2,273	929	1,892	47,393	1,408
Construction	17,587	10,460	16,287	132,321	1,378
Manufacturing	18,396	4,102	10,424	1,391,821	1,410
Transportation and Utilities	7,699	3,716	6,397	191,122	1,487
Wholesale Trade	16,650	6,691	14,473	190,844	1,477
Retail Trade	63,293	37,618	59,479	501,047	825
Automotive	11,575	6,975	10,857	68,726	1,044
Gas Stations	7,639	5,594	7,575	24,092	700
Eating & Drinking	15,999	9,895	15,104	102,828	522
Service	51,635	34,042	48,520	450,638	871
Hotels & Motels	1,510	738	1,298	23,612	637
Auto Repair & Services	4,544	3,221	4,401	18,840	930
Amusement & Recreation	2,245	1,129	2,057	17,424	707

Source: Bureau of the Census, U.S. Department of Commerce, County Business Pattern, 1964, Pennsylvania.

TABLE 3

EMPLOYMENT, EARNINGS PER EMPLOYEE, AND NUMBER OF REPORTING UNITS FOR THE FIRST QUARTER, 1964

Tennessee

	Reporting Units				Quarterly Earnings per Employee
	Total	Under 4 Employees	Under 20 Employees	Employees	
All Industries	59,995	33,370	53,879	820,474	$ 1,032
Mining	330	89	239	7,042	1,173
Construction	5,378	2,714	4,787	53,447	1,032
Manufacturing	4,817	1,314	2,977	345,061	1,159
Transportation and Utilities	2,168	1,033	1,778	39,815	1,332
Wholesale Trade	5,371	2,221	4,593	62,401	1,296
Retail Trade	20,031	11,517	18,838	146,388	725
Automotive	4,713	3,027	4,485	28,233	924
Gas Stations	3,177	2,329	3,147	12,029	673
Eating & Drinking	3,089	1,512	2,858	23,930	430
Service	15,608	10,494	14,797	116,392	761
Hotels & Motels	716	392	630	8,909	435
Auto Repair & Services	1,255	877	1,219	5,301	877
Amusement & Recreation	693	442	659	3,953	665

Source: Bureau of the Census, U.S. Department of Commerce, County Business Patterns, 1964, Tennessee

TABLE 4

EMPLOYMENT, EARNINGS PER EMPLOYEE, AND NUMBER OF REPORTING UNITS FOR THE FIRST QUARTER, 1964

West Virginia

	Reporting Units				
	Total	Under 4 Employees	Under 20 Employees	Employees	Quarterly Earnings per Employee
All Industries	29,072	16,931	26,606	350,861	$ 1,221
Mining	1,970	866	1,634	46,405	1,463
Construction	1,864	1,053	1,707	15,250	1,299
Manufacturing	1,720	525	1,173	119,140	1,503
Transportation and Utilities	1,425	686	1,193	26,859	1,404
Wholesale	2,225	934	2,008	19,954	1,296
Retail	9,712	5,851	9,176	61,428	752
Automotive	2,167	1,389	2,043	11,969	925
Gas Stations	1,423	1,127	1,410	4,140	642
Eating & Drinking	1,933	1,235	1,852	9,585	410
Service	7,224	5,108	6,931	46,000	767
Hotels & Motels	318	154	283	3,567	542
Auto Repair & Services	491	3[illegible]1	483	1,597	784
Amusement & Recreation	353	193	334	2,582	584

Source: Bureau of the Census, U.S. Department of Commerce, County Business Patterns, 1964, West Virginia.

For example, a good portion of the higher cost of a good quality motel room is accounted for by the higher quality of the room and furnishings and only a small proportion of the extra cost goes towards additional labor services. Further, the total employment effect of a recreation establishment of a given quality will depend on the number of months in the year the establishment is open. The field studies strongly indicate that quality establishments have a longer season; this appears to be in direct response to the particular visitor demand in the spring and fall.

Although the type of recreation establishment and its quality determine job opportunities, there is no evidence that location has any influence on labor intensity. Type for type and quality for quality, one can assume about equal labor demands. The only differences which have been observed are a wage differential from region to region. But these differences relate to the nature of the regional economies and not to any operational differences in the recreation industry. Most of the jobs in motels, restaurants, and amusement establishments need little training and skill, and the wages are therefore low. Thus, most employment in the service and trade industries is low-paid. The recreation industry, therefore, offers few opportunities for the skilled and ambitious among the local labor force who, in the absence of suitable local employment, must look elsewhere.

Moreover, a relatively large proportion of the employment is part-time or part-year. Full-time and part-time jobs are available for varying lengths of seasons and the highest demand, sometimes twice as high as the average demand, is during the summer or winter peaks. Workers in those jobs which are available full-time for the whole year, or for at least eight or nine months, are fully in the labor force and derive year-round incomes. Depending on seasonality and type of facility, this type of employment may account for less than half of the total employment in a recreation area. The rest of the incomes are earned in short-term, full-time, or part-time jobs by workers whose attachment to the labor force is seasonal or supplemental to some other activity, often students, housewives, or farm women. Thus a high proportion of such workers are women.

Recreation makes a considerable contribution to local tax revenues principally in the form of real estate taxes. Tax revenues from commercial enterprises and from vacation homes considerably strengthen the tax base, and in some areas where these taxes amount up to 20 percent of total tax revenues, it may be said that the municipal budget depends on recreation. Both commercial and vacation home real estate tax revenues are higher than municipal costs attributable to these two types of developments, and are unaffected by seasonality.

The recreation enterprises are run by small and very small businesses. Nationally over three-fourths of the recreation establishments have no year-round, full-time employees. In all recreation areas examined, the small establishments like small motels, refreshment places, gift shops, amusement places, and others are run as family concerns with only occasional part-time or full-time outside help. While not all the small-scale entrepreneurs are occupied for the whole year, the season provides them with a living.

In order to participate in the growth of the recreation industry, recreation areas must be able to accumulate investment capital for expansion. Though capital requirements are relatively low for commercial recreation enterprises, it is the common experience of the industry that, because of their small scale, the growth of investment capital from their own sources is rather slow. Borrowing is difficult because small recreation-based enterprises are considered risky, and the majority of enterprises have to rely on private resources or the reinvestment of retained earnings.

Magnitude of Total Direct Effects

Employment and Income

The total direct economic effects of the variety of recreation complexes examined in the field studies can be summarized in the finding that recreation as an industry can provide a considerable supplementary income to an economy based on more varied or productive activities, but that nowhere does recreation by itself form the basis of a viable economy. This conclusion stems from the nature of the industry discussed in the previous chapter. It is also drawn from the recreation studies examined in the extensive literature, and is now illustrated from the findings of the field studies. Despite the great volume of visitors and the enormously varied vacation activities, only a minor part of the money spent in local areas remains as income to the residents. More conclusively, of the many millions of dollars visitors and tourists spend, the resulting incomes to the people serving the visitors are on the average very low, usually inadequate as income for a family and often even for a single person.

Recreation offers two kinds of work and income: it provides a means of livelihood for the proprietors and managers, and it creates jobs for employees. (We are excluding from consideration farm recreation enterprises because they exist only to supplement the farmer's income.) The number of proprietors and managers engaged in recreation enterprises in any given area is inversely related to the size and scale of enterprises. At present, recreation enterprises are predominately small businesses; and to the extent that this will remain typical of the recreation industry, a relatively large number of opportunities will exist to meet the growing demand. Despite the small scale of individual businesses, relatively few establishments are needed to cater to a large volume of visitors.

Disregarding for the moment the pattern of visitors, as regards day-use or overnight stay, high visitor-volume areas such as Gatlinburg and Cherokee have only 250 and 125 proprietor-manager positions respectively. All other areas examined operate with between 20 and 35 proprietors. These constitute the identifiable primary recreation establishments such as motels, restaurants, amusement establishments, gift shops, and ski lifts; they do not include general retail and business enterprises which sell only some goods to tourists. The manager-proprietor occupations constitute the hard core and main source of family earnings in the recreation industry. Seasonality and fluctuations in volume of visitors and visitor-usage will limit the most productive and efficient use of their investment, but as long as they operate profitably these limiting factors do not prevent their earning a living. The same cannot be said of most of their employees.

The number of jobs for employees, converted to a man-year basis, may on first sight seem impressive. For example, recreation in Gatlinburg offers between 1,800 and 2,000 man-years of employment; Charles Town and Harpers Ferry together well over 1,000; Deep Creek Lake, Kentucky Dam Village, Cherokee, and Somerset between 200 and 500 each. But what actual employment and income does this provide? How many jobs are year-round and how many jobs provide an adequate family income?

There is no uniform pattern which determines the proportion of the man-years which go into year-round employment. It depends on three interrelating factors: the type of facilities, the scale of the area's operation, and the length of the season. The highest proportion of full employment jobs were found in Charles Town - Harpers Ferry, and at Somerset (about 90 percent and 80 percent respectively). At Charles Town and Harpers Ferry it is not the scale of the operation as much as the variety of particular recreation uses which offer and demand year-round employment. The first and principal factor is the ten-month long racing season at the two tracks which offer steady employment; this is reflected in the operation of the motels and restaurants. Secondly, the National Park Service at Harpers Ferry, although augmenting its staff during the summer season, has some 70 year-round employees. And the third reason relates to the growth of vacation homes, which provides steady employment to the construction industry. The Charles Town location near two large metropolitan areas explains the presence of the racetracks and of vacation home development. Harpers Ferry's historic associations, which provided the base for the National Park Service activities, is an example of a recreation resource which has failed to take advantage of its favorable location, as remarked elsewhere in the report. We learn from Charles Town that vacation home development and a steady and continuous recreation activity in a location at which a large volume of day visitors can be attracted will provide year-round employment opportunities.

Quite different considerations explain Somerset's high proportion of year-round jobs. Somerset was selected as one of the field case studies to examine the recreation development effect of a highly accessible location, not only in terms of nearness to a metropolitan area but close to a major highway interchange. In this aspect, the findings appear to be negative; the collection of motels and restaurants at the Somerset interchange have not stimulated the growth of other recreation facilities at this location, although it is generally situated within an area of a large number of vacation complexes. The Somerset interchange facilities merely serve the travelers, in transit, whether vacationers or travelers on business. It might be surmised that because of the many other vacation attractions in the Southern Laurel Highlands, and their direct accessibility from Pittsburgh, a busy highway location is undesirable for recreational use and cannot compete. However, Somerset, as a complex of facilities for transients operates the year round and offers steady employment like any other similar facility unrelated to general recreation.

In the next group of four study areas approximately 60 percent of the employees have jobs for the whole year -- Gatlinburg, Park City, Kentucky Dam Village, and Deep Creek Lake. Again, in each case the effect of scale, use and season interrelate in a number of ways. Gatlinburg is a good example of the effects of scale on the season and on the amount of year-round employment, and contrasts with Cherokee, at the other end of the Great Smoky Mountains National Park, which has so far failed to benefit as much. Gatlinburg has been able to take full advantage of its location at the entrance to the National Park and by adding a ski lift for the winter season and a full range of other recreation attractions has developed into a kind of recreation area which is a destination for long-term visits rather than a point to be visited en route. An additional factor at Gatlinburg for the relatively high proportion of year-round employment is the presence of the National Park Service personnel.

Unlike Cherokee, the visitor to Gatlinburg is offered many ways in which to spend his time and his money during the day as well as in the evening. Not only are gifts sold, but but some of them are also manufactured locally as at Cherokee. The scale and range of attractions has brought visitors in the off-peak periods, allowing most of the principal motels and restaurants to stay open, whereas at Cherokee several motels are open only during the peak period.

Undoubtedly the quality of the motel accommodation at Gatlinburg is an asset in attracting the off-peak visitor. This points to a general finding from all the field studies: that the occupancy rate at motels is directly related to their quality. At the peak of the season, it is the higher quality motel which is filled first, and during the early summer and fall the better accommodations are in demand almost exclusively.

Park City is an example of a recreation area with its main season in the winter, and it illustrates the case of private enterprise, aided by public investment, turning from a declining industrial activity to recreation as a source of income and employment. Within the space of three years a ski resort was developed followed by motel, restaurant, and bar facilities, all of which now employ about 110 people for the full year. Park City also illustrates the importance of the provision of special facilities to attract visitors. The ski lift and supporting establishments produce the winter peak but the summer is a relatively slack period despite the natural attraction of the area and the existence of accomodations. The absence of a lake is cited as the reason for the low summer visitation. Food, accommodation, and a pleasant view without anything else to do are apparently not enough for the visitor who wants to be entertained or participate in active sports.

The employment pattern at Deep Creek Lake contrasts employment effects of two different recreation activities. On the one hand the motels and restaurants which operate a limited season from June to Labor Day provide short-term employment, and on the other hand the construction workers who build the vacation homes are employed throughout the year.

At Cherokee, Capon Springs, and at Stratford approximately only a third of the employment is for the full year because the extended summer season is limited and there is little or no winter activity. Capon Springs is a seasonal resort. At Cherokee only the Historical Association, the handicrafts, and a few of the motels and restaurants provide year-round work. At Stratford only the festival staff is employed on an annual basis.

The analysis based on the number of jobs provided by the recreation industry, even those that are year-round, exaggerates the economic impact, because so few of the jobs pay a living wage. There is a limited demand for occupational skills which pay an annual wage of about $6,000 per year. Examples of better paid jobs are mechanics at amusement places and ski lifts, construction workers, professionals in the theater, public park employees, and a few at administrative and managerial positions at larger recreation establishments. In the small and medium sized enterprises the proprietors will normally perform those jobs which require skill and training. Examination of the composition of the labor force in the study areas on the basis of skills and wages, reveals that some areas provide hardly any jobs that pay an adequate family income.

The exceptions are places where state or national parks are situated, such as Harpers Ferry, Gatlinburg, and Cherokee, and other areas where vacation home development provides construction jobs such as at Deep Creek Lake and at Charles Town. At Stratford, also, the festival provides well paid administrative jobs; and even though the persons engaged in the theatrical performances are at Stratford only for about nine months, for that time they live in the town and spend their wages, which are as high as any in the recreation industry.

In the final analysis, therefore, after having sifted out the short-term and casual employment, and, in turn having narrowed the year-round employment to that employment which provides a primary family income, we find just a few areas where perhaps 50 to 100 employees make a living out of recreation -- aside, of course, from the proprietors and managers. All the other hundreds and thousands of man-years represent in varying degrees supplementary incomes. It is not surprising that the overwhelming number of these jobs are filled by women, and many in the peak periods by students.

In pointing out these limitations of employment and earnings, it should not be overlooked that the total payroll is sizable, and in areas of underemployment and generally low wage scales, this extra income generated by the recreation industry does have an impact of some significance. But for this payroll, which totals almost $4,000,000 in Charles Town -

Harpers Ferry, over $3,000,000 in Gatlinburg and Somerset, and varies between $500,000 and $1,000,000 in many other areas, these areas would experience out-migration or public assistance funds would be needed.

Employment Intensity by Type of Recreation Enterprise

One meaningful way of measuring the intensity of employment is to relate the employment in different recreation facilities to visitors' expenditures. Unlike the commonly used measure of relating total visitors to total employment, the expenditure ratio has the advantage of linking visitors' expenditure patterns to the employment effect. In other words, visitors' demands and preferences arising from overnight stays and the use of a variety of facilities indicate direct employment effects. From the 1963 Census of Business, average employment, including proprietors, per $1,000,000 of total receipts from recreation enterprises have been calculated. A detailed listing of employment per $1,000,000 receipts in selected recreation and related industries in the United States is shown in Appendix B. Taking the three major groups of enterprises; (1) food, (2) lodgings, and (3) amusement and recreation services, we find that the most labor-intensive establishments are hotels, motels, tourist courts, and camps, (121 proprietors and employees per $1,000,000 of receipts) and the lowest intensity is in the amusement and recreation service establishments (91). Eating and drinking places provide on the average 113 jobs per $1,000,000 of receipts. Within the major groupings of businesses there are, of course, variations in labor intensity. For example, hotels, because of the extra service they provide, show a higher intensity than motels, and trailer parks and recreation camps show a lower intensity than motels. Among the eating and drinking establishments, restaurants and cafeterias are more labor-intensive than refreshment places and bars. The widest range is found among the recreation or service establishments, but as a general rule, urban recreation establishments are more labor-intensive than outdoor recreation facilities. Among the typical recreation enterprises normally found in vacation areas, active sports activities such as swimming require less employment per dollar than amusements and tourist attractions. These national averages provide a useful guide, and in fact, the field studies support the general conclusion that motels on the average are most labor-intensive followed by restaurants.

It was observed that among the amusement and recreation enterprises a few are also labor-intensive. For example, ski lifts, racetracks, theaters, and special forms of amusement places can provide 100 or more man-years of employment per $1,000,000 of visitors' expenditures.

From the available evidence it can be concluded that measured by visitors' expenditures, there is no significant difference in the labor-intensity of a given class establishment between one recreation area and another. Rather, it is the quality and scale of the enterprise which account for a range of intensities. Due to the economies of scale, a larger motel will tend to have a somewhat lower intensity than a smaller motel, and a higher quality establishment will have a higher intensity than a lower quality establishment. The degree of intensity is not proportionate to the higher cost of the service because the cost of the service is related not only to the labor costs, but also to the capital investment. This fact points to the limitation of solely using total receipts as a measure of labor intensity. Prices are naturally affected by the amount of capital investment.

Some useful insights have been gained in the field studies, also, into the employment effects resulting from capital investment of different types of recreation enterprises. The employment effects of investment are of some interest because they may help to sharpen the focus of both public and private investment decisions. Private recreation enterprises have difficulties raising loans, and available public loan assistance might be fostered more purposefully and with better understanding if more were known about the employment effects of particular types of investment.

In the case of public investments the employment effects by themselves should not necessarily be the deciding factor. A costly public facility may have low direct employment effects but it can be the key activity which brings visitors to an area. For example, a large pool or beach and marina which have low employment potential should be regarded as stimulants to private investment and employment. Another example is the drama festival in Stratford, Ontario and the open air theater at Cherokee which would not have been built without subsidies, yet are essential elements in the recreation development. At Stratford the theater constitutes the only visitor draw attraction, and at Cherokee the open air theater provides the only form of evening entertainment. Characteristically, neither of these cultural events pays its way and they continue to draw on public and private funds for their continued existence. But nobody suggests that they be discontinued, since they bring the visitors from whom the areas benefit in other ways.

Private recreation investment must, of course, be profitable. It appears that those establishments which are labor-intensive in terms of receipts also provide good employment when related to the capital invested. The ski lifts at Park City and at Gatlinburg, the racetracks at Charles Town and a variety of commercial amusements have equal or higher employment per $1,000,000 invested than motels. What is more significant, the wages paid for jobs in these enterprises are higher than the wages for motel employees.

Wages

The measurement of impact does not end with the number of jobs created. It is the wage level (as well as duration of employment which is discussed under seasonality) which determines total disposable income for local spending by recreation employees. Compared to manufacturing employment, the wages in the service and trade industries are low, and the recreation sector includes some of the lowest wages. Most of the occupations require simple skills and little training; consequently the pay is poor.

Three wage levels are distinguishable within the recreation industry, ranging from the lowest in eating and drinking establishments (average annual wages according to the Census in 1963 -- $2,037)1/ to amusement and recreation services ($3,745).Table B-II in the Appendix shows annual wages for manufacturing, trade, and service industries, and for a selected number of recreation businesses for 1958 and 1963. The wage range in eating and sleeping establishments is fairly narrow but in the higher-wage amusement and recreation services

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1/ Wages quoted in the Census of Business exclude tips and are therefore lower than true earnings. However, earnings reported for Social Security contributions (see Tables 2, 3 and 4), which include tips, also show that earnings in this sector are the lowest.

the range is considerable. For example, such typical vacation attractions as amusement parks and horse racetracks pay annual wages of over $6,000; even the lower paid jobs in golf clubs and at natural tourist attractions are above the wage level of motels and restaurants.

Incomes in recreation have increased in recent years but not in the same proportion as wages of other industries; consequently the wage gap has widened. (See Table B-11.)

Hourly wages are not uniform for each type of recreation employment throughout the country because of regional differences in the labor market. Jobs in recreation, as in most service establishments, are not covered by a "minimum wage," and generally labor is not unionized. These factors mainly account for regional variations. For example, in Gatlinburg and Cherokee hourly wages range between 60¢ and $1.25, and in Park City where labor is unionized, the range is between $1.00 and $2.40. In the other areas the range is between 75¢ and $1.50. It should be noted that even farm laborers could not be attracted at these hourly rates.

Construction jobs and jobs in public parks are examples of better paid employment. At Deep Creek Lake and Charles Town where the construction business has grown with the vacation home development, and at other places where local contracting firms are building commercial establishments and public recreation facilities a small but well paid labor force has been maintained at wages comparable with national construction employment rates. At state and Federal parks and historic sites, trained specialists such as rangers, naturalists, and historic preservationists earn between $5,000 and $8,000.

Seasonality and Employment

Aside from the predominantly low wage level, employment is adversely affected by the uneven seasonal labor demand. There are two employment aspects to the seasonality of the recreation industry. The first relates to the actual length of the season and the second to the peak activity within the season. The season has become longer but the peaks remain. The trend throughout the industry is toward a lengthening of the season; al study areas show evidence of season extension, Areas which used to operate during the traditional period of July 4th to Labor Day are now open from May through November, and where winter recreation has been developed, such as in

Gatlinburg and Park City, activity is almost year-round. During the early summer and fall when the demand is curtailed it is common to find some of the establishments closed. The visitor demand during these extended periods is more limited because it serves a particular market, principally families without children or with children beyond school age. A special case of a ten-month season is Charles Town, where two racetracks are open alternatively for almost the whole year. Although the very short season appears to be a thing of the past, the two to three month summer or winter peaks are probably a permanent feature in the recreation industry.

How do the seasons and peaks affect employment? The longer season naturally has the desirable effect of providing a longer period of employment for some people but it also has two side-effects. In areas of low unemployment there is a tendency for establishments to keep their staff during the slack period to prevent annual recruitment problems. This has only become possible since the active season became extended. Secondly, provided persons are employed for a long enough period they are entitled to draw unemployment benefits for the remaining months of the year.

The peak demand remains a problem both to management and labor, as is evident from the size of the peak labor requirements. The additional peak employment may account for 50 percent or more of the total man-year labor needs. Because of the high peak employment many outsiders, mainly students, have to be recruited to fill vacancies.

A further employment effect of seasonality is the scarcity of workers to fill jobs demanding greater skills. In all study areas it was found that many of the skilled jobs, such as cooks, mechanics, and managerial positions, are performed by the proprietors and their families. They have difficulties in recruiting or holding adequately skilled persons largely because of the competition with permanent or otherwise more advantageous positions which are available in nearby towns. There is a consistent pattern of daily commuting of the skilled and semi-skilled workers who live in or near recreation areas to the surrounding towns. For example, in Gatlinburg 20 percent of the total resident labor force work outside Sevier County. Most of these workers are employed in manufacturing establishments in Knoxville. In Charles Town, apart from the vacation home commuters, about 22 percent of the resident labor force works outside Jefferson County in towns like Martinsburg, West Virginia, Hagerstown, Maryland, Winchester, Virginia and Washington, D.C.

Local Tax Revenues

Local tax income from recreation activities makes a highly significant contribution to a community. Real estate taxes provide most of the local tax income; personal property taxes, although local , are comparatively small, and other taxes, such as sales taxes, provide mainly state income. Real estate taxes from recreation enterprises strengthen the tax base of many communitites whose low total assessed value, dependent as it so often is on residential properties, leaves insufficient income for the improvement of public facilities. Taxes from vacation homes can also add to the local tax revenues. State-wide studies in the New England states and North Carolina estimate that between 5 and 10 percent of the total state local real estate taxes are derived from vacation homes, which do not add proportionately to the service load of the local government.

The Charles Town - Harpers Ferry field study provides an illustration of the real estate tax benefits. Motels, restaurants, and the two racetracks account for just under 20 percent, and vacation homes for about 7 percent of the total real estate taxes of Jefferson County.

The size of tax revenues derived from real estate depends mainly on the size of the investment. Vacation homes are on the average more highly assessed than the existing homes because they are newer and of equal or better construction than the existing homes. Therefore, house for house, they bring in a better revenue than the older residential properties. Another and more significant, difference between vacation homes and other residential properties is that tax revenue from vacation homes is not matched by public expenditures. The highest single item of public expenditure is education and vacation homes cause practically no expenditure on that account because the occupants of these homes during the school year are older families without school-age children.

Tax returns from commercial recreation enterprises vary with investment but compare favorably with other local commercial development. The main public cost directly attributable to commercial recreation enterprises is for road improvement, maintenance of roads due to the heavy volume of visitor traffic as well as extra expenditures for traffic control. Trash collection and disposal, maintenance of rights-of-way and local public parks and buildings to create an attractive environment are also local cost factors. It was not possible to obtain accurate figures to establish a cost-benefit ratio but it may be fair to say that on balance commercial tax revenues are higher than the necessary public service expenditures. Therefore, recreation establishments like vacation homes yield a profit on the municipal balance sheet.

Vacation Homes

Vacation homes present a special aspect of recreation. The benefits flowing from vacation home development have a more widespread effect than the benefits from commercial recreation enterprises. Aside from the significant direct effects on a local economy, vacation homes introduce new and different people to a community. Unlike other vacationers, who merely visit the area briefly, the vacation home owner becomes part of the community and participates in its business and political life.

The striking growth of extensive vacation home development has occurred in recent years largely for the same reasons which influenced recreation demand generally. The increase in the number of higher income families was particularly important; but increased urbanization has played a significant part. With spreading urban development into the countryside, the suburban home owner finds himself more and more removed from a natural environment, and he looks for a second home or a permanent home in a true country setting, preferably within comfortable driving time of his other home and his work.

The main, concentrated demand for vacation home sites is therefore felt near metropolitan areas. The field studies show clearly that sizable vacation home developments occur mainly in recreation areas near urban population centers. They also confirm that driving time is a determining factor in site selection. An examination at Deep Creek Lake of the distribution of the place of permanent residence of vacation home owners shows that the numbers diminish with the distance from the vacation home site. The range of accessibility will widen, of course, as improved highways reduce driving time.

The vacation home no longer means exclusively a small summer cottage which is visited only in vacation season. In fact, it is put to a variety of uses. Some owners who use it only for a short vacation rent the vacation home for the rest of the season. This helps the owner to finance his second home; or he may regard it as an investment. But it also benefits the area because of the longer occupancy of the home. Other owners visit their second home extensively for vacations and on weekends throughout the year. The trend to spring and fall weekend visits of resorts and recreation areas has been noted before. The vacation home fulfills a similar function for short stays by childless couples and for family gatherings on holidays. Finally, a growing number of so-called vacation homes are becoming permanent, year-round homes used either by people who commute to work or who have retired.

Three forms of vacation home development are discernible: (1) scattered site development which results from the sale of small farms or the sale of unproductive farm lots; (2) vacation home subdivisions; and (3) vacation home clubs which appear to be the favored form of development at present. They differ from subdivisions by providing common recreation facilities such as golf courses, lakes or pools, and club room facilities. Site ownership is restricted to club members and often the design of homes is controlled.

This study is not concerned with the relative merits of these forms of development but with the economic effect of the more extensive and changed use of vacation homes. These changes bring a greater number of people, they visit the area more often and stay longer, and the new houses they live in are of better construction than previous summer homes. This means more building and more spending and much of this new activity brings benefit to the area. The most immediate and direct employment effect is felt in the local construction industry.

Vacation home developments have not yet reached a sufficient scale for extensive subdivision building operations which require large contracting firms. (This does not apply to organized retirement home developments, as in Florida and elsewhere, which are built by large contracting firms.) Prefabricated structures are popular as vacation homes and it is a common practice for the makers to erect them. To the extent that these types of houses are built there are restricted opportunities for local employment. However, the site work súch as the foundations and septic tanks, can and are being built by local labor. Most other vacation homes are custom built and the small construction firms are particularly suitable for building them. The scale of development is seldom very large but the rate of vacation home construction in recent years has been continuous and steady. For these reasons the existing small construction firms in recreation areas have been able to take advanatage of the opportunities and have grown as demand required. In several study areas it has been observed that a few small firms have increased their staff over the years and they have been able to offer year-round employment. In one instance a firm gained sufficient experience to undertake larger projects, such as a local school which formerly would have to have been built by outside firms. Apart from the construction of homes, maintenance work also helps to keep the local builders in operation all year round. Additional employment is available in the club-home developments, both full year and during the season to service club facilities.

Vacation homes' other major direct contribution to the economy comes from increased retail sales and increased business activity. Apart from the normal purchases of household and family goods the banks, insurance, and other business and professional services gain in income.

The tax revenues from vacation homes have already been mentioned, as well as the net municipal benefit due to the low, or practically non-existent municipal costs arising from this type of development. It remains to point out that a sizable residential development cannot occur without an increase in land values, partly due to demand which raises land prices and partly due to speculation which anticipates further price rises originating in future demand. Nevertheless, the enhanced land values have a tax effect and since most of the capital invested in sites comes from outside the area, there is an opportunity for local capital formation.

Tangible as all these benefits are, vacation home development may have another more striking effect on community development. The injection of new blood into an area, in the form of urban population with high standards and high expectations of public services, has firm and long term effect toward upgrading the range and standard of public services. This aspect will be further examined in the last chapter. It is raised here because it is evident that the need for more extensive local services will arise in the future in many areas of substantial vacation home development.

The range of problems, which are as yet not acute, concern land use and community facility planning. The question of the location of further vacation home development, without destroying the area's attraction, must be settled. Waterfront sites and hilltop sites are prime examples of uncontrolled growth which sometimes spoil the attractive environment and prevent access to rivers and lakes for fishing, boating, and swimming. In the club- home development this is generally well handled, except that the preserved amenities are accessible only to club members and not to the residents of the area.

Waste disposal and the provision of water will in many areas become a grave problem. Existing developments have to rely for water on individual wells and on septic tanks for waste disposal. Except on particularly suitable soils the tight lot development cannot be serviced by these means, when the areas have fully developed, without causing pollution problems and water shortages. Unfortunately many rural communities function at present without zoning bylaws or planning controls which are the basic tools to prevent these problems.

Measurement of Indirect Effects

Multiplier Explained

An expenditure gives rise to an income which in turn leads to a further chain of expenditure-income-expenditure. The impact of the initial income derived from an expenditure is therefore usually greater than that income itself, insofar as the subsequent rounds of expenditure are related to the income. We speak of the initial income as the direct effect and the subsequent rounds of derived incomes as the indirect effect. The combination of the direct and indirect effects of an expenditure pattern constitutes the impact. Since not all of the income generated in each round of expenditure is respent -- some proportion tends to be saved -- the impact is not infinite but rather tends to converge to some finite multiple value of the initial income. Hence the impact of a particular pattern of expenditures tends to be referred to as the multiplier of that pattern.

The magnitude of the multiplier varies inversely with the magnitude of the leakages associated with the different patterns of expenditure. Thus any leakage from spending within any of the rounds of a particular pattern of expenditures will diminish the multiplier magnitude -- the impact -- of that pattern of expenditures. Saving has been noted as one of the leakages in the respending process; another leakage from the stream of spending in any particular locality would result from spending outside of that locality; that is, leakages from the income stream resulting from importing. The combination of the propensities to spend and to import limits the magnitude of the impact of a pattern of expenditures prevailing in a locality. On the other hand this limitation is partially offset by the interregional ("foreign trade") multiplier which derives from new rounds of export expenditures in the area, originating in income generated by area imports.

All other things being equal, the greater the proportion of income locally spent, the greater will be the multiplier value. Thus, leaving aside interregional trade multiplier effects, anything which encourages successive local respendings of income will generate greater growth of local income, if there are sufficient unused resources available to generate locally the wanted goods and services upon which income is expended.

While this study is concerned with the direct earnings resulting from tourist expenditures, it should be made clear that any export activity (that is, the use of income originating outside an area to purchase goods or services produced in it) will give rise to a multiplier effect. In the aggregate, in the absence of tracing through the subsequent rounds of respendings, the size, diversity, and per capita income level of the local economic base will determine the average leakage. If, in general, a local population were to save 25 percent of their income, and if the goods and services purchased with the remaining three-fourths included imported components equal to one-third of their value, then the total leakage would amount to one-half of the income generated on each successive round of spending (1 - 1/4 = 3/4; 3/4 - 1/4 = 1/2). A leakage of one-half of the local income earned outside of the local respending chain implies a multiplier value of 2. Thus for each dollar of income earned through export activity, two dollars of income earned locally will be generated in all the rounds of respendings. Similarly, if the propensity to save and to import add to one-third of income earned, a multiplier value of 3 is implied. These relations are illustrated in the following diagram (where the vertical descending arrows relate the chain of decreasing increments of local income, after subtracting at each round the constant percentage leakage represented by the oblique descending arrows).

Appalachian County Multipliers

The multipliers estimated in this study[1] were based on county employment data. They represent the approximate measure of the direct and indirect employment associated with each addition of direct employment to the export sector of a county. There are 375 counties and 3 independent cities for which multipliers were estimated. The smallest multiplier was 1.13 and the highest was 2.63. Thus the county with the smallest multiplier value would provide other employment opportunities for approximately 0.13 persons for each person directly employed in servicing export demand, and the county with the highest multiplier value would provide other employment opportunities for approximately 1.63 persons for each person directly employed in servicing export demand. In general, county employment multipliers vary directly with the population or total employment size of the counties: as county population size grows, so does the multiplier value. This relationship is as might be expected, insofar as import leakages would tend to be less where diversity of occupations is greater; and diversity is positively associated with county population or total employment.

1/ See Appendix C for the development of the model and the economic theoretic and statistical discussion relating to derivation and explanation of the multiplier values.

ILLUSTRATION 1

ILLUSTRATION OF SUCCESSIVE ROUNDS OF LOCAL INCOME GENERATED FOR SAVINGS & IMPORT LEAKAGES OF 50% AND 33⅓%

AN INITIAL INCOME OF $10.00 WILL UPON SUCCESSIVE RESPENDINGS EARN:

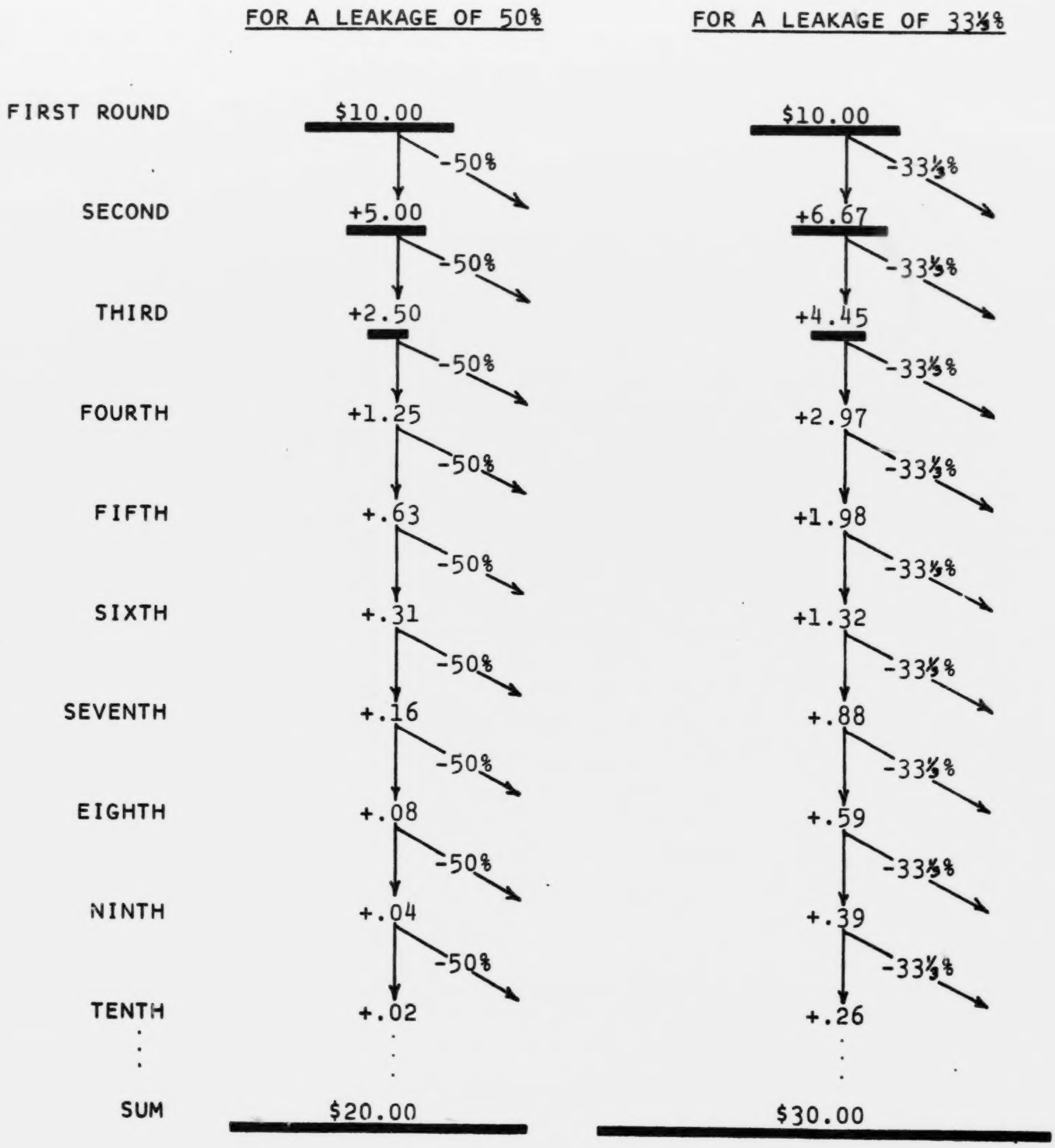
FOR A LEAKAGE OF 50%
FOR A LEAKAGE OF 33⅓%
FIRST ROUND
$10.00
$10.00
-50%
-33⅓%
SECOND
+5.00
+6.67
-50%
-33⅓%
THIRD
+2.50
+4.45
-50%
-33⅓%
FOURTH
+1.25
+2.97
-50%
-33⅓%
FIFTH
+.63
+1.98
-50%
-33⅓%
SIXTH
+.31
+1.32
-50%
-33⅓%
SEVENTH
+.16
+.88
-50%
-33⅓%
EIGHTH
+.08
+.59
-50%
-33⅓%
NINTH
+.04
+.39
-50%
-33⅓%
TENTH
+.02
+.26
SUM
$20.00
$30.00

TABLE 5

PERCENT OF MULTIPLIER SIZE CLASS DISTRIBUTED OVER COUNTY EMPLOYMENT SIZE CLASS FOR 376 APPALACHIAN COUNTIES AND INDEPENDENT CITIES

Multiplier Size Class	County Total Employment Size Classes (thousands)						All Size Classes
	1-2.9	3-4.9	5-9.9	10-19.9	20-49.9	50 or greater	
2.50 & over			12.5	12.5	37.5	37.5	100
2.40 - 2.49			16.7	16.7	33.3	33.3	100
2.30 - 2.39			10.0	25.0	50.0	15.0	100
2.20 - 2.29		7.1	14.3	50.0	25.0	3.6	100
2.10 - 2.19		11.9	33.3	31.0	16.7	7.1	100
2.00 - 2.09	4.9	14.6	34.1	29.3	12.2	4.9	100
1.90 - 1.99	21.1	2.6	31.6	28.9	13.2	2.6	100
1.80 - 1.89	17.2	25.0	34.4	17.2	3.1	3.1	100
1.70 - 1.79	14.3	25.7	28.6	22.9	8.6		100
1.60 - 1.69	35.6	22.2	31.1	8.9		2.2	100
1.50 - 1.59	48.4	29.0	16.1	6.5			100
1.49 & less	58.8	29.4	11.8				100

The average (mean, median, and modal) multiplier value for all Appalachian counties falls into the range of 1.80 - 1.89. This implies that, on the average, in an average Appalachian county, if 100 people are employed to service export demand, an additional 80 to 90 people might be expected to find employment as a result of subsequent rounds of expenditures. The average Appalachian county, then, shows an approximate 54 percent leakage in its income-expenditure stream, most of which can be attributed to imports from other U.S. counties. This leakage contrasts with approximately 88 percent or the bottom of our county multiplier ranges, and 38 percent for the top.

Inter-industrial Linkages

As developed in the foregoing discussion, the multiplier value represents a telescoping of an expenditures-income stream. By focusing on income and employment effects, however, the discussion bypasses all of the inter-industial linkages and the intermediate transactions which are required in order to make a delivery to final demand. Nor, in a complex and highly interdependent economic system, is it adequate to describe the relations between intermediate and final demand as a vertical production stages scheme. Rather, the interrelatedness is more meaningfully portrayed as a network or a matrix, ramifying all of the effects stemming from a delivery to final demand.

Thus, at each round in the expenditure-income chain, with respect to final demand purchases, there are inter-industrial effects which can be also analyzed in terms of direct and indirect impact. In illustration of the direct and indirect linkages, we might note that the delivery of one ton of steel to final demand requires the total production of more than one ton of steel. This follows insofar as steel is also required as an input into the mining, processing, and transporting of the iron and coal which are the ingredients in the manufacture of steel in the first instance. Similarly, the iron and coal directly required to produce the steel in the first instance give rise also to production of iron and coal as ingredients in the equipment to mine and transport the iron and coal. This network of direct and indirect effects is mathematically solved in an inverse matrix of the input-output table where all of the repercussions of a delivery to final demand are distributed and summed. The latest input-output table available to study the industrial structure of the U.S. economy is based on 1958 data.1/

In this study a $1.00 delivery of steel to final demand directly and indirectly necessitated a total output requirement of $2.48.

More relevant to a study of the tourist industry, for each dollar of final demand for hotel and personal services, the direct and indirect requirements for total output summed to $1.79: the hotel and personal services industry itself requiring a total output of $1.03 and the other 76 cents of total output being distributed among the other sectors of the economy. The chief impact on other sectors were felt among the following:

1/ These are in terms of producers' prices where the wholesale, retail, and transport margins are attributed to those sectors.

Real estate and rental industry	$ 0.07
Business services	0.05
Finance and insurance...................	0.03
Wholesale and retail trade..............	0.07
Electricity, gas, and water.............	0.03
Electronic components and accessories ..	0.02
Miscellaneous manufacturing	0.03
Miscellaneous fabricated textile products	0.02

Similarly, the direct and indirect total requirements upon the U.S. economy in 1958 per dollar of delivery to final demand by the amusements industry summed to $1.87 with the total output of the amusement industry being $1.31 and the chief impact on other sectors as follows:

Maintenance and repair construction	$ 0.04
Real estate and rentals	0.08
Business services	0.06
Communications, except broadcasting	0.05
Wholesale and retail trade	0.03
Miscellaneous manufacturing	0.02

The repercussions cited in the foregoing are those which ramify throughout the U.S. economy rather than any subregion of the economy. The finer the regionalization of the economy, the less would be the inter-industrial linkage incorporated and therefore, the less would be the power of the small subregion to contain the inter-industrial impacts. What would be retained in the small subregion would be the direct local value added of the initial expenditures and the local added values incorporated in the subsequent respending, minus leakages.

The U.S. input-output study does not incorporate household income effects in the form of a household sectoral consumption function and, therefore, the coefficients of its inverse matrix do not reflect an income multiplier.

If household income effects were incorporated into the inter-industrial scheme, then the successive respendings of income earned would also be captured into the inter-industial scheme, then the successive respendings of income earned would also be captured into the accounting system of the scheme and both income and inter-industrial multiplier effects would be represented. Several such regional input-output studies (with incorporated household income effects) have been undertaken. On a county basis, their composite multiplier values turn out to be of the same order of magnitude as the multipliers estimated for the same counties in this study.[1]

For Clinton County, Pennsylvania, a composite multiplier (combining inter-industrial and household income effects) of 1.94 was estimated. This composite multiplier is the weighted average multiplier for all the export sectors of the local economy. By sectors, manufacturing industry had a multiplier of 1.82, agriculture 2.75, retail trade 1.69, and recreation activity 1.98. These sectoral multipliers are again weighted averages of all of the activities included in the sector. Thus, while recreation activities in general show a 1.98 multiplier, any particular recreation activity might show an individual multiplier greater or lesser than 1.98, depending on the local value added incorporated in the first recreationist expenditure and the pattern of the subsequent respendings. Thus, the authors of the Clinton County study estimate that if a ski and water resort were introduced into the region, it would have a multiplier of 2.76, and that there would be increases in the activity levels of other sectors as follows:

All industry	$ 8,000
Agriculture	3,000
All retail	93,000
All service	41,000
Construction	4,000
Wholesale	21,000
Utilities	8,000
Local government	11,000
State and Federal	2,000
Households	117,000

All told, annual ski resort revenues of $164,000 would result in total gross local receipts of $450,000.

Similarly, a composite multiplier of 1.94 was estimated for Sullivan County, Pennsylvania through an input-output study incorporating household income effects. Here too, recreationists' activities showed a somewhat higher sectoral multiplier than the composite, 2.20. The introduction of a golf course and a ski resort into the economy of Sullivan County were estimated to involve multiplier values of 2.26 and 2.17, respectively.

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[1] Several such studies are documented and their multipliers compared with those estimated in this study. These are discussed in Appendix C.

Spatial Leakages

We have discussed impact in terms of the expenditure-income chain and its leakages and the inter-industrial linkages at each round in the expenditure-income chain. The following illustrates for two case study areas -- one with a relatively high county multiplier and the other relatively low -- the relationship of the direct and indirect expenditure patterns, the inter-industrial linkages, and the spatial dimension of the leakages.

In Capon Springs, Hampshire County, West Virginia (Illustration 2), a mountainous, sparsely populated rural community, the direct impact of the export dollar to the area is represented in direct resort employee wages, tax and utility receipts, and the value assigned to food products grown on the Resort's two farms.

What becomes apparent in the illustration are the second-round leakages from the expenditures in such categories as wholesale and retail trade.

In Charles Town, Jefferson County, West Virginia (Illustrations 3 and 4), the town and its immediate surroundings have traditionally been the trading center for this County. The direct impact of the export dollar is only partially realized in these two graphic illustrations. What is not shown is the magnitude of the impact of employee wages (about 1,000 racetrack employees in a County of 18,000 persons) most of which is spent in the County for food products, clothing, lumber, and building supplies. Thus, the impact is greater here because of the value added in local retail and wholesale activities.

Illustration 4 also shows the estimated $125,000 expenditure for track maintenance supplies, largely locally purchased and manufactured.

ILLUSTRATION 2

MULTIPLIER: 1.75

LOCUS OF EXPENDITURES FOR PRODUCTS AND SERVICES BY CAPON SPRINGS RESORT-FARMS
(exclusive of direct resort employment)

Distance from Capon Springs	Community		Expenditure Item
240 miles	Philadelphia, Pa.	❐	wholesale: beef
			retail: sundries, major appliances, clothing
130 miles	Baltimore, Md.	❐	wholesale: soap, toilet items
112 miles	Washington, D.C.	❐	wholesale: furniture
33 miles	Winchester, Va.	❐	wholesale: concrete products* bricks* roofing materials* lumber-building supplies food products, seed and feed
			retail: vehicle parts
		✪	contract construction, vehicle maintenance, wood finishing
0 miles	Capon Springs Resort-Farms	❐	food products

LEGEND
❐ Trade
✪ Services
* Products manufactured in Winchester from local raw materials

ILLUSTRATION 3

MULTIPLIER: 2.33

LOCUS OF EXPENDITURE - CHARLES TOWN, JEFFERSON COUNTY, WEST VIRGINIA

Two Race Tracks - Care-Feeding of Horses (exclusive of direct employment)

Distance from Jefferson County	Area	Product-Service
20-40 miles ------	Virginia-Maryland---▲	wholesale: hay, straw, oats, misc. feed medicine
		retail: hay, straw, oats, misc. feed
		✪ laboratory analyses, tack repairs
0 miles ------	Jefferson County--▲	wholesale: hay* straw* oats, hay, misc. feed, medicine
		retail: hay* straw* oats, hay, misc. feed, medicine

TOTAL EXPENDITURE -
Care-Feeding of Horses 1965
(exclusive of wages)

$500,000 ---

LEGEND: ▲ Trade
✪ Service
* Grown in Jefferson County

ILLUSTRATION 4

MULTIPLIER: 2.33

LOCUS OF EXPENDITURE - CHARLES TOWN, JEFFERSON COUNTY, WEST VIRGINIA

Two race Tracks - Maintenance Supplies (exclusive of direct employment)

Distance from Jefferson County	Area	Product-Service
60 miles	Baltimore, Md. ▲	wholesale: soap, toilet articles
0 miles	Jefferson County ▲	wholesale: paperboard* millwork and lumber* lime* fire extinguishers* lumber-building supplies retail: hardware

TOTAL MAINTENANCE SUPPLY
EXPENDITURE - 1965 -
(exclusive of wages)

$125,000

LEGEND:
▲ Trade
✪ Service
* Manufactured in Jefferson County

There are 1,200-1,500 horses stabled in this area for approximately 10 months a year. While it is estimated that 75-80 percent of the supplies used in the care and feeding of the horses (included in Illustration 3) are locally purchased in Jefferson County, only one-fourth of this is grown locally; thus there are considerable third-round leakages to Baltimore, Roanoke, and Canada.

Detailed information on leakages was obtained in only these two field study areas, both quite small, where the flows could be easily identified. For the larger and more complex areas the collection of such information would have been a formidable task, each a study in itself. But in general it can be stated that since no area is entirely self-sufficient there are always leakages, which reflect the inability of the base economy to meet the demands placed upon it. Where the multiplier is low the leakages are high, and vice versa.

Leakages in recreation activity can be minimized by developing locally as many goods and services as possible to meet industry needs. In many areas this will mean nothing more than supplying garden truck and dairy products to tourist serving establishments. In others it might entail the establishment of a sawmill or a millwork plant; contract construction enterprises and building maintenance firms. In areas such as Gatlinburg and Cherokee the craftsmen are a real force for reducing potential leakages by satisfying, through local sources, the visitor demand for gifts and handicrafts.

Relation of Multiplier Values to Recreation

We have indicated in the foregoing discussion that the multiplier values derived in this study are equivalent to composite input-output multipliers in which household income effects have been incorporated. Thus each county's employment multiplier reflects the interindustrial linkages and the propensity to consume locally associated with the economic base of that county.

The county multipliers presented here are averages and actual multiplier effects in any given area would vary from industry to industry, depending primarily upon terms of local employment and inputs from local suppliers.

The greater the industrial diversification (associated with employment size of the county), the greater will be the likely local inter-industrial linkages and the greater will be the likely local variety of production of final goods and services, this variety of inter-industrial supply and of final goods and services increases the likelihood of local purchase of local products thereby increasing the likely value of the county employment multiplier.

Whether the recreation industry will have a greater, equal or lesser multiplier than the average county employment multiplier depends, therefore, on the industrial structure or economic base of the county. The multiplier effects of a recreation activity will tend to approximate the average of other export activity when the range of wages are similar and the local inputs (such as construction and maintenance and repair) are also of similar magnitudes per employee. In a small county with an extremely limited range of economic activities (for example, where food processing associated with low productivity farming are the dominant activities) the recreation multiplier would tend to be higher than the average for the county as a whole; on the other hand, in a county with a varied range of basic activities where recreation employment compared unfavorably with other types of export induced employment the recreation multiplier would be below the average.

The multiplier as expressed here cannot be used to compare and evaluate the benefits of one sort of development with another. An input-output matrix of each county economy would be required in order to make such precise comparisons. Nor, for the reasons stated in the preceding paragraph would it be possible to say that recreation, as an export activity would always have the average multiplier effects. This will depend upon the employment it provides in comparison with other types in the area and upon the ability of the local base to retain further rounds of spending.

Even with these limitations, the multipliers provide a useful tool for making development decisions with respect to recreation as an industry. The following are the principal applications of the county multipliers:

1. The multiplier, as an average, gives an order of magnitude of the secondary employment effects of a given increment

of export generated employment. As such it will assist the States to discriminate among counties in the employment impacts which can be anticipated from a development project.

2. Although it will provide no direct guidance among the alternatives to recreation development, the multiplier is a benchmark to which differentials of wages and other inputs can be applied to determine whether, in any given area recreation is likely to produce a multiplier effect greater or smaller than the average.

3. If economic development is undertaken on a multi-county basis, the multipliers of the counties might be useful in planning programs and siting activities so that employment in the district grows at an optimum even though there is a wide variance among the counties within the district. If one conceived of a development center in which, by virtue of its more complex economic base the multiplier would be relatively high associated with a group of counties where the multipliers were smaller in proportion to their distance from the center, it would be possible to reserve low impact activities such as recreation to those portions of the district where they would have relatively high secondary impacts and focus the high impact development in the parts of the district where the multipliers are higher.

4. The multipliers are useful in identifying the relative strength of the areas economic bases of the counties. The leakage from any area is in inverse proportion to the multiplier size. Whether recreation or other activity is introduced into an area, the multiplier will be raised and the leakage reduced to the extent that the base of the area is enhanced by the activities which will support the new industry and furnish more goods and services to the local population.

IV. THE DEVELOPMENT EFFECTS OF RECREATION

The major concern of Chapters II and III has been the direct and indirect economic impact of the recreation industry. The analysis has shown that in spite of the conspicuous and sustained increase in demand, there are a number of reasons which prevent recreation-tourism alone from being a satisfactory solution to the economic ills which beset the underdeveloped regions of the United States. Demand is limited and distinctly income-elastic. Areas are not equally endowed with respect to natural beauty or unique attractions. The industry is notably seasonal, which prevents full utilization of the capital invested. Much of the employment generated is intermittent and most is low paid. Finally, it is not clear that recreation-tourism can provide employment and income which is commensurate with the total capital investment required. Much of the investment may be justifiable only if other benefits are entailed.

If this is the case, why should the recreation industry be so commonly considered as an avenue to economic improvement? Perhaps the simplest answer is that often, in lieu of other easily worked resources, recreation appears to be the most easily recognized and the most readily exploited avenue to economic growth. In areas where the natural resource base has been depleted; or where shifts in market demand have eroded the economic base, and remoteness from markets and material sources impede the development of other activities, recreation-tourism to exploit some attractive natural features may be the only opportunity -- at least initially. Under such circumstances the impact, though poor, may be better than nothing.

But areas characterized by chronic, long-term unemployment and underemployment need more than tourism-oriented jobs for regeneration. And indeed, the social and physical infrastructure may be too "poor" to support an economically productive transformation of natural features into tourist attractions of sustained popular appeal. As employment opportunities have declined, the young, the enterprising, and the adaptable tend to migrate; loss of tax base provided by the traditional activities results in deteriorating public services; commercial activities suffer from reduced patronage, and both the resources and incentives for modernization are reduced. These factors produce attitudes which reinforce the cycle of decline and reduce the willingness, as well as the ability, of the area to make favorable adaptation to changing conditions which are the key to long-term economic improvement in general, and to an effective recreation industry in particular.

Recreation as a development tool does, however, have certain possibilities. In drawing visitors from outside the area, it publicizes the area and its resources (sometimes literally "putting it on the map") which may induce investors to consider the area as a site for locating other enterprises, recreational or otherwise. This was the experience in Puerto Rico. By meeting the somewhat more complex and exacting demands of visitors, the trade and service industries may be upgraded. Outsiders, whether visitors or entrepreneurs, provide valuable sources of innovation and raise the sights of the area by demonstrating new ways of doing business and questioning the old. The infusion of new blood into the community can result in additional insights into what is lacking and how it can be remedied at the Governmental level. It can also raise the aspirations of local residents whose horizons are broadened by contact with outsiders.

All of these possibilities are stated as conditional because they materialize only if there is a conscious effort to use recreation as an instrument for development, and utilize it in concert with other broad scale efforts at community improvement. In fact, the case studies we examined which evidenced the most pervasive development impact were those that evidence the most extensive involvement by citizens of the community in the main recreation enterprise.

What happened at Stratford, Ontario illustrates the development possibilities of recreation. This small city had been heavily dependent on the shops of the Canadian National Railroad as its principal source of employment. The city had been run to please the railroad management and its employees. The emphasis in civic leadership was on economy, not progress. In talking to business people and officials, "complacent" was the word most frequently used to describe the community. When it was announced in the late 1940's that the shops would be closed, the first reaction was that the city was done for and that the only possible response was resignation to the inevitable. A group of local businessmen, however, seized upon the idea of a Toronto newspaperman and Stratford native that the community should capitalize upon its name and its location on the Avon River to establish a Shakespeare Festival. The first money was contributed by these men and the intention was to bring a new kind of community into being rather than to bring them benefits in increased profits. In the interval since the Festival started in 1953, both have happened. The Festival was a rallying point for the community. From the beginning, when lack of tourist accommodations required the opening up of private homes to paying guests, this has become a source of satisfaction to householders. A public leadership has emerged which is concerned with the quality of the community as well as the cost of public services.

The public park which borders the river has been landscaped to provide a fitting setting for the Festival Theater and a recreation spot for Festival visitors, but it has also become a source of pride and enjoyment for the local residents. There is a deep-seated conviction that the improvement of the city was an effect of the success of the Festival as much as a cause and that the Festival and the changes which accompanied its growth were an important element in the industrial growth in recent years. The plant managers who were interviewed denied any connection, but the Industrial Commissioner felt the promotional value of the Festival was great, that prestige attached to a Stratford location, that the responsiveness of the local government to Festival needs had produced an impressive level of public services all of which were reflected in the successful efforts to attract new industry. The businessmen of the city tell how well their businesses are doing, but what they stress is the quality of life in the city and the need to preserve it. Morale is high. Things have gotten better and they will go on improving.

The cultural attractions at Cherokee have served a similar purpose. Without them, Cherokee would be only a second and less attractive entrance to the Smoky Mountain National Park. The Indian Pageant, Museum, and Village have provided a focal point around which other activities are being developed exploiting other resources in the environment and the Indian labor force. It is not surprising that the emphasis on development has occurred in this area since it has had the support of the Bureau of Indian Affairs, whose concern is with the social and cultural accommodations of the Indians as well as their economic advancement. The ways in which the Indian Farm Boys Club has used the attractions of the

Park and the Reservation to build a set of productive economic activities from the transportation of school children, to the operation of campgrounds, to the stocking and operating of tribal fishing streams, and shops for maintenance of their own and other public vehicles, illustrates an extension of recreation effects far beyond what the housing and feeding of visitors to the attractions would supply.

The experience in Gatlinburg, 40 miles away, is almost the opposite. The leading townspeople are determined that Gatlinburg will be a tourist center and nothing else. They want no other kind of "development," and indeed they want no "outsiders" even in the tourist development. A few have prospered conspicuously by capitalizing on the increase in land values resulting from the restricted access to the National Park, and they have parlayed this to expand the tourist attractions, which has further increased the value of the land and the earning power of tourist facilities. Such "outsiders" as have established enterprises have remained "outsiders." Many of the people of the town and nearby participate through employment generally of poor quality, generally at low pay. The direct impact, relatively, is considerable; the indirect impact minimal, and the development effect almost nil. As long as existing conditions persist, the most that Gatlinburg can expect from the expansion of the recreation industry is more of the same, with little or no development.

At Harpers Ferry there is the beginning of a development cycle. The reconstruction of the historical portion of the town by the National Park Service induced an enterprising "outsider" to acquire and renovate an old summer hotel which has a commanding view of the Potomac River. He has further restored a street of old shops and attracted a variety of tenants who offer souvenirs, gifts, antiques, and crafts of the area for sale to visitors to the historical monument. While these shops provide negligible employment, and many are operated only part-time, they are becoming an attraction in themselves which brings visitors to the area and hold others longer. Meanwhile, there has been considerable vacation home construction in the area. Up to the present, there is no indication that the community has become involved in supporting efforts to enhance the recreational base of the area. As the, vacation homes multiply and the attendance at the National Monument increases, the demands upon the town and county will grow. Unless the emerging needs for land-use planning, traffic control, and waste disposal are met, the development cycle which has been initiated will be checked or its benefits deflected to some other area.

In development experience, both at home and abroad, it has been found that the contributions of knowledge and leadership of the outside innovator who brings a different and more sophisticated experience to a community is often the decisive factor in starting a development cycle. A second important factor is the degree to which community interest can be aroused and public resources mobilized in support of a set of complementary actions which will create a better life for local people as well as creating more profits for any particular set of interests. As a starting point, a recreation attraction can be as effective as a factory.

It is not uncommon for an area to approach its economic salvation by going out and looking for a "smokestack" -- that is, through tax remission, subsidized plant site or building, or other means, to induce an industry to locate in the town and thus provide employment. Sometimes the plant comes; the new payroll improves the profits of local merchants; the relief load is lightened. But the community may remain unchanged and the next attempt to attract an industry may not be succussful. It may be because the management, which might have to be imported, objects to poor schools and a shabby shopping district, or perhaps because the local government has been unwilling or unable to confront problems of properly servicing an industrial site. It may even be that the conviction on the part of everyone that the outsider is a nuisance and the town is going nowhere anyway, has discouraged a potential activity. On the other hand, if the location of the new industry is regarded by the community as a great achievement which is indicative of its inherent vitality, if the comments and responses of the new comers it brings are used as guides to changes which will make the area more acceptable to its next prospect, if the merchants use some of their new profits to improve the appearance of the downtown, and if the local government looks ahead to where it might help another enterprise locate and is prepared in advance to take those steps, the development process is started. There is a change in morale, a change in environment, and a new initiative in both the private and public sectors which will lead to a series of self-reinforcing actions.

The demands of recreation visitors upon the local base are different but can be just as productive of change. While the tourist may be less concerned with the quality of an area's public education, he is likely to be very sensitive to the physical appearance and amenities, to modern facilities, passable traffic circulation, cleanliness, good taste, and courtesy -- as he defines them in terms of his own standards and experience. The ability to interpret and anticipate these demands is one of the greatest assets of an area seeking recreation development -- or development of any kind, for that matter -- and experience in the field studies and otherwise, demonstrates that it cannot be taken for granted. Lacking it, the prospects for growth of recreation enterprises, as well as other economic activities, are dim, and economic impact will be minimized. Development effects and the economic effects go hand in hand. Although it is possible to have economic effects with no basic development changes, they tend to be less than could be achieved, and they fail to provide a base from which more stable and productive economic activities can be induced to grow.

APPENDIX A

SELECTED BIBLIOGRAPHY

The following is a selected bibliography of the recreation industry in the United States. It is selective in that the works listed relate only to those aspects of the industry that fall within the scope of this study. For this reason, the substantial literature on farm enterprises is not included since these activities, for the most part, only generate supplemental family income, but little additional employment.

The brief annotation that accompanies each item is also selective, mentioning only those factors that have relevance to this study, although the overall scope of the work may be much broader.

The bibliography is arranged alphabetically by author (with the exception of the ORRRC studies which are placed at the end). An index follows the bibliography.

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A study of visitor spending in Southeastern Florida. Estimate of tourist dollars spent each season, including amount per day, per visitor and of distribution of tourist dollar, (number of employees from out-of-state at peak and spending of tourist workers also estimated).

44. __________ - *The Economic Value of State Parks in Oregon*. Oregon State Parks & Recreation Division, State Highway Dept., 1959.

Investigation into the impact of a State park in Oregon on the local economy. Breakdown of expenditures in 25 mile area around park by types of visitor (camper, day user), estimate of proportion attributable to park. Influence of park on private lodgings and on local business (food, eating and drinking, service stations), comparison of growth near park with control area.

45. __________ - *Great Smoky Mountains National Park Travel Study*. North Carolina State Highway and Public Works Commission, Tennessee State Department of Highways and Public Works, United States Bureau of Public Roads, 1956.

A study of visitors to the Great Smokies National Park including data on the number of visitors and reason for visit; estimates of annual and summer spending in the park area by type of visitor (day, overnight, camping) and distribution of total expenditures. Discussion of future requirements.

46. __________ - *Non-Resident Travel in Washington, 1959-60*. Washington State Department of Commerce and Economic Development, Business and Economic Research Division, 1961.

An investigation of non-resident travel in Washington. Data on number and type of visitors, type of lodging, and expenditures related to mode of transportation, reason for trip, etc.

47. __________ - *Cabin Resort Income in Northern Wisconsin*. Univ. of Wisconsin, College of Agriculture, 1965. (Bulletin 576)

A study of the income derived from cabin resorts in northern Wisconsin. Investigations covered commercial and semi-commercial operations, and includes data on value of property, costs and rate of return per cabin and per resort. Discussion of problems and ways to improve income.

48. Outdoor Recreation for America - The report of the Outdoor Recreation Resources Review Commission to the President and to the Congress.

Currently, the most extensive surveys of outdoor recreation in the United States are contained in the Outdoor Recreation Resources Review Commission (ORRRC) studies of which the most relevant are listed below.

Report No. 10 - Water for Recreation - Values and Opportunities. An analysis of future water-based recreation, including a discussion of its role in relation to other types of water development and of the necessity of planning for recreation in water resource projects.

Report No. 11 - Private Outdoor Recreation Facilities. A report on existing private recreation facilities (resorts, camp grounds, ski areas, etc.) in the United States. Sixty-six case studies of various types of private recreation facility. Information on the amount of land, number of visitors, fees charged, plans for expansion and problems encountered.

Report No. 13 - Federal Agencies and Outdoor Recreation. A descriptive analysis of the organizational and administrative structure of Federal agencies concerned directly and indirectly with outdoor recreation.

Report No. 19 - National Recreation Survey. A study based on data collected in a nationwide survey of outdoor recreation habits. Breakdowns by region, activity, age, sex, place of residence, education, occupation and race, etc. Estimates of expenditures, amount of leisure time spent on outdoor recreation, etc. Descriptive analysis of the results of the survey.

Report No. 20 - Participation in Outdoor Recreation. Factors Affecting Demand Among American Adults. A study, based on a sample of the effect upon participation in outdoor recreation of income, education, occupation, paid vacation, region, sex, race, etc. Discussions of outdoor recreation in relation to leisure-time use, vacation, weekend trips, parks and recreation areas.

Report No. 21 - The Future of Outdoor Recreation in Metropolitan Regions of the United States. A discussion of the outdoor recreation problems of metropolitan residents.

Report No. 23 - Projection to the Years 1976 and 2000: Economic Growth, Population, Labor Force and Leisure, and Transportation. Four studies projecting the size, distribution, income, leisure and mobility of the population of the United States, 1976 and 2000. National, regional and state data.

Report No. 26 - Prospective Demand for Outdoor Recreation. A study based on various sources of the needs and preferences of the population for various outdoor recreation activities.

INDEX

The following is a functional subject index composed of twelve categories of significance to this study and under which the numbers of relevant works in this bibliography are listed.

Category	Bibliography Numbers
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APPENDIX B

TABLE B-I

EMPLOYMENT PER ESTABLISHMENT AND PER $1 MILLION RECEIPTS IN SELECTED RECREATION AND RELATED INDUSTRIES IN THE UNITED STATES, 1963

Kind of Business	Proprietors and Employees per Establishment	Proprietors and Employees per $1 Million Receipts
Eating, Drinking Places	6.24	113
Restaurants, Lunchrooms	8.05	124
Cafeterias	16.54	123
Refreshment Places	4.88	119
Caterers	9.16	112
Drinking Places (Alcoholic Beverages)	3.44	85
Hotels, Motels, Tourist Courts, Camps	7.19	121
Year Round Hotels, 25 or More Guest Rooms	32.84	132
Year Round Hotels, less than 25 Guest Rooms	3.08	160
Seasonal Hotels	3.91	55
Motels, Tourist Courts	3.53	117
Motor Hotels	20.43	115
Trailer Parks	1.72	100
Sporting Recreational Camps	1.65	83
Amusement, Recreation Services, Except Motion Pictures	4.59	91
Dance Halls	6.35	190
Children's Dance Schools	3.46	251
Other Dance Schools	2.03	209
Automobile Racing	4.68	56
Dog Race Tracks	28.71	31
Horse Race Tracks	64.29	33
Dog and Horse Racing Stables	1.92	127
Public Golf Courses	6.46	89
Golf Clubs, Country Clubs	12.26	114

Amusement, Recreation Services, Except Motion Pictures (Continued)	Proprietors and Employees per Establishment	Proprietors and Employees per $1 Million Receipts
Skating Rinks	5.55	147
Swimming Pools	1.63	55
Boat, Canoe Rentals	1.62	102
Bathing Beaches	2.02	53
Riding Academies, Stables	2.18	130
Other	1.83	130
Amusement Parks, Kiddie Parks, Theme Parks	5.18	49
Concession Operator of Amusement Devices, Rides	2.34	93
Carnivals, Circuses	5.61	43
Fairs	.96	21
Tourist Attractions, Natural Wonders	6.16	87
Coin Operated Amusement Devices	3.16	56
Other	4.23	100
Dance Bands, Orchestras, except Symphony	5.82	346
Entertainers (Radio, Tel.), except Classical	1.48	103
Symphony Orchestras, Opera, Ballet Cos., Ice Show	40.00	125
Other Classical Music Groups	5.20	101
Operator of Legitimate Theater	16.98	65
Operator of Hall or Tent for Live Theatrical Shows	6.15	66
Legitimate Theater Operator and Producer	12.71	90
Producer Only of New York or Road Shows	19.07	64
Producer of Summer Shows	5.47	35
Stock or Repertory Co. Operating Own Theater	12.73	109
Stock or Repertory Co. Not Operating Own Theater	15.52	75
Producers of Live Shows for Radio, TV	13.04	38
Entertainers, Managers, Agents, Concert Bureaus	4.19	63
Ticket Agencies	2.69	47
Other Theatrical Services	2.09	91

	Proprietors and Employees per Establishment	Proprietors and Employees per $1 Million Receipts
Amusement, Recreation Services, Except Motion Pictures (Continued)		
Billiard, Pool Parlors	2.32	140
Bowling Establishments	10.51	103
Baseball Clubs	13.70	32
Football Clubs	52.43	72
Other Sports Clubs, Promoters	18.19	73

Note: Employment as of November 15, 1963

Source: U.S. Bureau of the Census, 1963 Census of Business: Retail Trade and Selected Services.

TABLE B-II

AVERAGE YEARLY WAGES IN SELECTED INDUSTRIES; UNITED STATES, 1958 and 1963

	1958	1963
Manufacturing	4,888	5,885
Wholesale Trade	4,717	5,860
Selected Services	3,117	3,738
Retail Trade	2,729	3,285
Eating, Drinking Places	1,916	2,037
Hotels, Motels, Tourist Courts, Camps	2,279	2,736
Amusement, Recreation Services	2,889	3,745
Selected Recreation Services:		
Hotels, 25 or more rooms	2,369	2,788
Hotels, less than 25 rooms	1,613	1,877
Motels	1,844	2,164
Trailer Parks	2,405	2,797
Horse Race Tracks	3,835	6,351
Public Golf Courses	3,405	3,859
Golf Clubs, Country Clubs	3,005	3,295
Swimming Pools	1,798	2,602
Boat Rentals	2,421	3,653
Amusement Parks, Theme Parks) Concession Operator of Amusements)	3,319	6,241
Tourist Attractions, Natural Wonders	3,470	3,508

Source: U.S. Bureau of the Census, Census of Business, 1958 and 1963.

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APPENDIX C

APPALACHIAN MULTIPLIERS

On the Estimation of Local Impact

This study has resorted to a combination of available national data and regional data of sufficient industrial (sectoral) disaggregation to approximate regional differentials with regard to the shortrun impact on employment resulting from changes in expenditures originating outside the sectors which service local demand for locally produced goods and services in 376 counties and independent cities of Appalachia. To do so, we have taken total employment in each of 376 counties[1/] and independent cities of Appalachia, and we have attempted to identify that proportion of total local employment engaged solely in servicing local consumption of locally produced goods and services. The estimates are therefore the result of removal of that employment which we infer is engaged in servicing national and regional export demand, investment demand and part of government activity. The remainder then approximates local consumption demand. Thus in our analysis, national and regional export activity, investment activity and part of government activity constitute the exogenous sector while local consumption activity constitutes the endogenous sector. It is the latter which is derivative of the former. While consumption is the end of all economic

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[1/] Except for Carroll, Galax and Grayson Counties, Virginia for which one multiplier was computed.

activity, its level depends ultimately on the level of income (and its growth on the growth of income). It is, relative to all other economic activities, the stablest in terms of proportionality to income. Hence local consumption of local product is treated as having a stable derivative relation to total economic activity, which in turn is subject to greater variation because of the greater variation in its non-local consumption components[1/] -- the components of the exogenous sector in this analysis.

The model of the regional economy from which we derive the multiplier is developed below. Its conceptualization was drawn from W. Isard and S. Czamanski, "Techniques for Estimating Local and Regional Multiplier Effects of Changes in the Level of Major Governmental Programs," Peace Research Society Papers, Vol. III, 1965. In the Isard-Czamanski study it turns out that, after comparisons of several approaches of varying degrees of complexity and cost, "(1) the economic base multiplier after adjustment for investment and government expenditure, (2) the input-output multiplier (inclusive of household-income effect) and (3) the marginal simple econometric multiplier are generally of the same order of magnitude... The

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[1/] We are at this stage of the analysis leaving aside the possible increase in local consumption activities as a result of import substitution.

size of the multiplier effect derived and the justification for the use of one model as against another depends primarily on the problem at hand, data available and the time and the resources which the analyst can command."[1] Given this analysis, plus the knowledge that the Regional Economics Division of the Office of Business Economics was developing on tapes data which could easily be assembled into economic base multipliers, we experimented with several forms of systematic adjustment to remove the other (than regional exports) exogenous elements. We then tried the resulting technique for developing an adjusted economic base multiplier for several counties in Appalachia for which recently input-output studies (in which the household incomes were treated endogenously) had been completed. The multipliers resulting both from our model and from the input-output analyses were of similar magnitude, as the Isard study indicated would be the case. We therefore proceeded with the application for all Appalachian counties. The derivation and specification of the local employment multiplier is developed in the model stated as follows.

1/ Op. cit. supra p. 32.

The Estimating Equations

(1) $E_r = E_{rc} + E_{rI} + E_{rg} + E_{rx}$, the fundamental identity.

(2) $E_{rc} = (E_{rc}/E_r)\ E_r$, an identity highlighting an approximate constant local consumption relation for the endogenous sector where E_{rc}/E_r can be thought of as a slope parameter.

(3) $E_{rx} = \Sigma E_{ir}(1-1/L_{ir})$ $\begin{pmatrix} (L_{ir} = 1, \text{ for } L_{ir} \leq 1 \\ (L_{ir} = L_{ir}, \text{ for } L_{ir} > 1 \end{pmatrix}$ $\begin{pmatrix} (i = 1,2\ldots,32) \end{pmatrix}$

regional exports, the usual "basic" sector.

(4) $L_{ir} = \dfrac{E_{ir}/\sum\limits_i E_{ir}}{\sum\limits_r E_{ir}/\sum\limits_i \sum\limits_r E_{ir}}$, location coefficient where all the r sum up to U.S. employment.

(5) $E_r - E_{rc} = E_{rI} + E_{rg} + E_{rx}$

$= \sum\limits_i E_{ir}\ (1-1/L_{ir}) + (1 - c_i/y_i) - \varepsilon_{ir}$, the adjusted exogenous sector.

(6a) $\varepsilon_{ir} = (1-1/L_{ir}) + (1 - c_i/y_i) \leq 1$, or

(6b) $\sum\limits_i \varepsilon_{ir} = (1-c/y)\ \dfrac{E_{rx}}{E_r}$, an adjustment to "correct" some of the distortion arising from an "adding-up" problem.

(7) $E_r = (E_{rI} + E_{rg} + E_{rx})\ \dfrac{1}{1 - E_{rc}/E}$

(7a) $\dfrac{\partial E_r}{\partial E_{rI}} = \dfrac{\partial E_r}{\partial E_{rg}} = \dfrac{\partial E_r}{\partial E_{rx}} = \dfrac{1}{1 - E_{rc}/E_r}$, the multiplier.

Each of the equations together with the data used will be briefly explained below.

Explanation of the Model

(1) E_r, regional employment equals E_{rc}, local employment servicing local household consumption expenditures; plus E_{rI}, local employment servicing exogenous investment activity, plus E_{rg}, local employment servicing exogenous local, state and national government activities; plus E_{rx}, local employment engaged in regional exports. Regional employment is taken from the data generated for the eight volume study by Lowell D. Ashby, Growth Patterns in Employment by County, U.S.D.C./O.B.E., 1965 and 1966 wherein employment is disaggregated into 32 industrial sectors.

(2) E_{rc}, local employment servicing local household consumption expenditures remains a short term approximate constant proportion of total regional employment. This relationship is residually derived as may be seen in equation (5). It is for our study, the only endogenously determined employment.

(3), (4) E_{rx}, local employment engaged in regional export activities is that proportion of regional employment in an activity greater than the U.S. proportion, given by L_{ir}, the location coefficient. This measure has several well-known deficiencies which are considered in a later discussion assessing the deficiencies and advantages of the estimates we are using. All of the data used in this specification are taken from the above mentioned O.B.E. employment patterns. E_{rx} divided into total E_r gives the usual "basic" multiplier which "base" theorists postulate as the cause of regional growth.[1]

(5) $E_{rI} + E_{rg} + E_{rx}$, the entire exogenous employment activities of the region are derived from total regional employment by subtracting the regional export employment through application of the location coefficient and by subtracting the sectoral employment directly and indirectly attributable to nonpersonal consumption expenditures as a proportion of total final demand. The latter specification is based on an application of the 1958 U.S. input-output sectoral allocation among components of final demand by reaggregation to conform to this study's sectoral aggregation. In addition a further adjustment is made, described immediately below.

(6a), (6b) While the national proportions of employment engaged in producing domestic consumption items, investment items, government and export items differ from the relevant regional proportions, the largest discrepancies occur between regional and national employment engaged in export activities and employment engaged in producing domestic consumption activities. That is, $\frac{E_{rx}}{E_r} > \frac{E_{nx}}{E_n}$, the proportion of employment engaged in regional exports is much greater than the national proportion since trade proportions between U.S. regions is much greater than the U.S. proportion engaged in international trade; and $\frac{E_{rc}}{E_r} < \frac{E_{nc}}{E_n}$, the proportion engaged in producing for domestic consumption is much smaller than the national proportion chiefly owing to the larger part of local consumption being supplied through interregional trade. Thus the sum of employment in regional export activities will not add up to national exports (nor should they), nor will the sum of employment for regional consumption items add up to national employment attributable to personal consumption expenditures.1/ Thus to a large extent the combined sum of regional export employment and regional employment to service local consumption will add up to combined national employment for export and for production of domestic consumption items. That is, the surplus derived from adding-up regional export employment will in large measure offset the deficit derived

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[1] That is, according to base theory, regional exports constitute the exclusive cause of growth and hence the multiplier for growth is taken simply as total employment divided by export employment. This postulation is not necessary for our analysis.

1/ This seems to be the strongest single argument against merely scaling the national input-output bill of final demand to estimate that for the region, no matter how large the region so long as it is smaller than the U.S. itself.

from adding-up the regional consumption employment.[1] Since the parameters derived from location coefficients and input-output distributions of nonpersonal consumption expenditures relative to total final demand do not derive from the same universe and do not strictly add to that proportion of local employment for purposes other than supplying local consumption demand, there is some distortion in the distribution of regional employment between the exogenous and endogenous components of this study. Occasionally this distortion might produce an obvious absurdity such that exogenous employment in a sector, in a region, might be greater than total employment in that sector, in that region.[2] To this end we note two alternative decision mechanisms to reduce the distortion. (5a) simply states that the two parameters must add to less than or equal to unity, and that if it exceeds unity the difference, ϵ_{ir}, must be subtracted from the value greater than unity so as to at least exclude the possibility that exogenous employment is greater than total employment in a sector; in general (6a) is an under-correction. (6b) is a more general approach which suffers more from the danger of throwing the baby out with the bath water. It tends to be an over-correction in that the greater the exogenous proportion to total employment in a sector, the greater will be the relative as well as the absolute correction. While (6b) might tend to eliminate the adding-up problem discussed above, its major disadvantage is that, in so doing, it tends to eliminate the regional differential which we are so hard put to develop.

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[1] However another problem raises its head, in that the location coefficient doesn't really pick up national exports except to the extent that national exports are largely derived from special regions for specific outputs; e.g., coal exports largely derive from West Virginia, steel exports largely from Pittsburgh.

[2] This distortion is quantitatively discussed below.

(7), (7a) Substituting equation (2) into equation (1) we have produced equations separating the exogenous and endogenous sectors with the fractional term representing the local multiplier which indiscriminantly -- for any net change in any exogenous component[1/] -- affords an overall regional relative order of

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[1/] It should be noted that the input-output multipliers by sector will show the generation of expenditures occuring in each component of the input-output table resulting from each final demand expenditure. Thus, if household income effects are included, the expenditure-income path might be traced out as it ramifies throughout the structure of the regional economy. A tourist's dollar spent at a motel will trace a different path than will a tourist's dollar spent at a souvenir shop or a restaurant or a gas station. Similarly a tourist's dollar spent on almost any regional tourist activity will trace out a different path on the regional economy than will, say, a dollar paid to the region from outside as a result of transfer payments or as a result of the export of regional raw materials, etc. The aggregate regional adjusted multipliers developed in this study can be thought of as equivalent to a composite input-output multiplier (including income effects) weighted by its proportional share of a net dollar income earned in the exogenous sector. In most input-output studies the gross expenditure-gross income path is traced, in Local Secondary Effects of Watershed Projects, A Case Study of Roger Mills County, Oklahoma, U.S.D.A., ERS 178, however, both a local gross receipt multiplier (1.78) and a local net income multiplier (1.62) were estimated.

magnitude to assess the impact, the direct and indirect employment effects attributable to a change in exogenous employment, the multiplicand.

In this analysis, the multiplicand relates to the direct employment associated with a particular recreational complex. That is, for each type of recreation complex there is an associated direct employment to service the activities of the complex -- waiters, cooks, chambermaids and other service personnel -- as well as to service the other local expenditures by tourists. The incomes earned by these personnel and expended locally give rise to indirect employment to service the effective demand exercised locally by the on-site personnel directly employed as a result of the net regional export of tourist activities. Thus the product of the multiplier associated with a region and the multiplicand associated with a recreational complex gives the total employment impact on the region associated with a pattern of tourist expenditures that would result in the region, given the successful local establishment of the particular recreational complex. While the multiplier is derived from official national and local statistics according to the above model (and checked against other studies), the multiplicand is derived directly in the case studies undertaken for this analysis as well as other published case studies on recreational employment.

Induced Investment [illegible]

The impact measure formulated above, all other things being equal,[1] will tend to understate the employment effects of an increase in tourist activity, in the longer run, to the extent that we eschew induced investment from our analysis. That is, if employment in investment activities is more aptly specified as $E_{rI} = \overline{E}_{rI} + iE_r$, where $\overline{E}_{rI}$ remains autonomous as before but iEr represents that portion of investment which is induced by the level of regional economic activity, we would be able to include in our impact measure a super multiplier carrying also the accelerator impact. A more detailed breakdown of the investment function to include the particular investment effects induced by increased activity in the tourist sector of the economy might be specified as follows:

$E_{rI} = \overline{E}_{rI} + i_1 (E_r - E_{rx_2}) + i_2E_{rx_2}$, where E_{rx_2} is that employment engaged only in servicing tourist activities. The super multiplier for tourist servicing employment would then be (following the equations of the multiplier model above):

$$\frac{\partial E_r}{\partial E_{rx_2}} = \frac{1 + i_2}{1 - E_{rc}/E_r}$$

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[1] We will note some of the ceteris paribus implications in our later analysis of the deficiencies and advantages of the above developed impact measure.

where i_2 is a statistically estimated parameter, $0 < i_2 < 1$, relating the change in investment to the change in tourist activity. Thus the employment resulting from the building and maintenance of second homes associated with tourist complexes and the other associated investment activities would be included in this expression for a combined multiplier - accelerator impact measure. Of course, statistical series do not permit a general estimation of the induced investment effect of recreation complexes.[1/] For this reason, some induced effects are treated ad hoc in this study.

Appalachian County Employment Multipliers

The multiplier values derived through the above model range from 1.13 to 2.63. These values imply that, on the average, for each direct addition to employment associated with the exogenous sector there will be approximately 0.13 to 1.63 persons added to the roles of employment in the endogenous sector -- in local service and production activities -- indirectly resulting from the increase in direct exogenous employment, according to the county in which the direct employment occurs.

[1/] That is, second homes or retirement homes are not only associated with particular types of tourist complexes but also with water shore-lines, distance from and access to metropolitan areas, year round climate. Too, other induced investments such as sawmills or other activities in the construction industry would depend not only on the size of the tourist complex but the total economic base.

In general, as in other studies, the multiplier size varies directly with the population size of the economic base -- in this study, with the total employment size of the county. In Table C-I, following, we illustrate the mean multiplier value for each county total employment size class together with the standard deviation about the means.

TABLE C-I

AVERAGE MULTIPLIER VALUES AND STANDARD DEVIATIONS FOR SIX COUNTY EMPLOYMENT SIZE CLASSES

County Employment Size Class	Average Multiplier	Standard Deviation
1,000 - 2,999	1.67	0.17
3,000 - 4,999	1.78	0.17
5,000 - 9,999	1.90	0.22
10,000 - 19,999	2.02	0.24
20,000 - 49,999	2.17	0.20
50,000 and above	2.21	0.28

Insofar as no pretense is made to precise measurement nor to prediction of the multiplier size precisely on the county size, we have not regressed the relationship of multiplier value on the county size value so as to obtain a slope parameter. We have arranged the data in the following tabular-graphic device so as to illustrate, however, the strong direct relationship between the two magnitudes.

It will be observed in Table C-II, following, that the upper left and lower right corners are empty. This illustrates that zero percent of high multiplier values are associated with low population densities and that zero percent of low multiplier values are associated with densely populated counties. Similarly, the positively sloped diagonal blocks transversing the table from lower left to upper right indicate the rising slope of the relation between multiplier size and county size. These blocks contain 50 percent or more of the total of that size class, combining (when less than 50 percent in any single instance) the first two largest contiguous instances adding to 50 percent or more.

TABLE C-II

PERCENT OF MULTIPLIER SIZE CLASS DISTRIBUTED OVER COUNTY EMPLOYMENT SIZE CLASS FOR 376 APPALACHIAN COUNTIES AND INDEPENDENT CITIES

Multiplier Size Class	County Total Employment Size Classes (thousands)						All Size Classes
	1-2.9	3-4.9	5-9.9	10-19.9	20-49.9	50 or greater	
2.50 & over			12.5	12.5	37.5	37.5	100
2.40 - 2.49			16.7	16.7	33.3	33.3	100
2.30 - 2.39			10.0	25.0	50.0	15.0	100
2.20 - 2.29		7.1	14.3	50.0	25.0	3.6	100
2.10 - 2.19		11.9	33.3	31.0	16.7	7.1	100
2.00 - 2.09	4.9	14.6	34.1	29.3	12.2	4.9	100
1.90 - 1.99	21.1	2.6	31.6	28.9	13.2	2.6	100
1.80 - 1.89	17.2	25.0	34.4	17.2	3.1	3.1	100
1.70 - 1.79	14.3	25.7	28.6	22.9	8.6		100
1.60 - 1.69	35.6	22.2	31.1	8.9		2.2	100
1.50 - 1.59	48.4	29.0	16.1	6.5			100
1.49 & less	58.8	29.4	11.8				100

Multiplier Operationality and Validity

There are many questions which arise in connection with the estimated multiplier values. Most of these questions can be placed in two categories: (1) those concerned with the validity of the estimates and (2) those concerned with the preconditions to effect the operationality of the estimates. We can postpone discussion of validity just long enough to deal with the less lengthy discussion of operationality.

(1) These multiplier values, it may be recalled from earlier discussion, are approximate and average measures of the impact of a unit of direct employment in any of the exogenous sectors. It is entirely unwarrantable to draw the inference that placing an outdoor recreation complex in a county with the largest multiplier value will necessarily result in a realized growth of direct and indirect employment greater than if the complex were located in any other county. Clearly, if there is virtually full employment in any of these counties, the multiplier would be a better indicator of the order of demand - pull inflation that might occur rather than the order of increase in production. Thus a first precondition for the multiplier value to be operational is that there be unemployment of resources sufficient so that the activation of direct employment will in turn take up some of the slack in the local economy in terms of

indirect employment. That is, there must be unemployed employables available so that in the successive rounds of expenditures these employables will be put to work to serve the new demands created rather than the non-existence of slack implying price inflation in vain bidding for unavailable resources. Counties, therefore, which are endowed with both high multipliers and virtually full employment should be disregarded as candidates. Second, the availability of unemployed must be related to the pay scales that dominate the activities in a tourist complex and the endogenous sector, largely consisting of relatively low paid service personnel. Thus it is also required that there be an available supply of labor willing to undertake the relatively lower paid occupations in both the tourist and the endogenous service sector in order for the impact to operate.

Thus far, two supply factors have been adduced to determine the operationality of these impact measures with respect to tourism. An additional factor, which spans both operationality and validity, concerns our choice of geographic unit. Our choice devolved upon the county only for reasons of convenience. Well known data deficiencies on the smaller-than-county level dictated the county as the essential building block. However, these multipliers calculated on a county level assume a tendency toward uniform distribution of population and occupation over the entire county. This is, of course, wrong. Thus if the population of a county tended to concentrate in the northwest corner of the county, and if the site of a tourist complex were located in the southeast corner, the correct multiplier to apply to that tourist complex would be the multiplier of the adjacent urban concentration, whether in the county in which the complex is situated or not. This implies that in a second phase, a further focusing-in should take place in which alternative sites are specified and relevant neighboring community multipliers are estimated to conform to the specified sites. Nevertheless, we believe that since most, though not all, of the neighboring counties share similar multiplier values, the relative orders of magnitude implicit in the hierarchy of multiplier values are fair indicators of the impacts, given the operationality considerations discussed above.

(2) The questions subsumed under the category of validity also impinge somewhat on the preceding discussion. But for simplicity of discussion we have broken apart some of these considerations. The dominating question now becomes how well do these multiplier values reflect reality in the event that none of the operational questions were to obtain. Here, we must confess our inability to give an absolute judgement; we can only rely on comparisons and indicate the order of biases arising from our

procedure. Our comparisons of necessity must appear to be with respect to disparate items; recall that these multipliers are average effects resulting from any change activated in the exogenous sector and that we are unable to trace each step in a pattern of expenditures for each of the counties or for each of the patterns. Nonetheless, it will be shown that there is a good deal of correspondence between the average impacts estimated by our gross (but inexpensive) technique and the average impacts developed in more detailed studies investigating single or few instances.

a. We referred to two input-output studies earlier in connection with the choice of the model for estimating or evaluating regional multipliers. Both of these studies treated household income effects endogenously, thereby permitting comparison with the adjusted multipliers estimated in this study. The two studies concerned counties in Appalachian Pennsylvania, one a small rural county, Sullivan,[1/] and the second an intermediate sized relatively diversified economy, Clinton.[2/] Both

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[1/] H.B. Gamble, An Input-Output Model Incorporating Impact Analysis to Evaluate the Resources and Economy of a Rural Appalachian Community, unpublished doctoral dissertation. The Pennsylvania State University, University Park, Pa. 1965.

[2/] H.B. Gamble and D.L. Raphael, A Microregional Analysis of Clinton County, Pennsylvania, The Pennsylvania Regional Analysis Group, the Pennsylvania State University, University Park, Pa., Vol. I 1965, Vol. II 1966.

studies are sufficiently detailed to permit tracing the impact of an expenditure pattern through their respective interindustrial structures.

By summing the column elements of the interdependency coefficients or inverse matrix of the input-output matrix, the respective sectoral multiplier is obtained. The composite multiplier is the sum of all the sectoral multipliers weighted by their proportions of final expenditures. It is this composite multiplier, which the authors of the above input-output study call the "export" multiplier, which is the equivalent of the mutliplier estimated in our study. The composite multipliers resulting from both the Clinton County and the Sullivan County input-output studies were both 1.94, in spite of the fact that the former county was much larger and industrially more complex than the latter county. The equivalent multipliers estimated in this study were 2.03 for Clinton County and 1.90 for Sullivan County. Neither was substantially different from the composite multipliers of the input-output studies, but nonetheless this study's multipliers exhibit somewhat greater sensitivity, on the aggregate level, to the greater size and complexity of Clinton County's economy over that of Sullivan County.

Thus we regard the closeness of composite multiplier values derived in this study and the H. Gamble studies, using different techniques and independent data but essentially measuring similar directly unobservable phenomena, as a validation of the order of magnitude values estimated in this study. This correspondence of course, follows the correspondence which Isard[1] found. Indeed, there is a similarity in the values of the adjusted multipliers[2] that were found for specific SMSA's by Isard (using different data, a different level of disaggregation and a somewhat different technique) and those estimated for the larger counties in this study.

b. The positive association between the size of the multiplier class and the size of the county employment class, illustrated in Tables C-I and C-II above, may in itself be construed somewhat as a confirmation of the validity of the multipliers estimated in this study as relative orders of magnitude. That is, as the employment size class increases one would normally expect that the implicit diversity of economic activity which is positively associated with employment size would make for smaller relative import leakages. This empirical association operates both with respect to nations and to regions. The reduction of this leakage element with increased size and diversity, all other things being equal, would imply a larger multiplier. Paradoxically, we might even observe that some of the dispersion about the mean multiplier value for a given employment size class further validates the mutliplier value as orders of magnitude. Thus Beaver County, Pennsylvania whose 1960 employment size was 70,735 (in our largest employment size class) showed an adjusted multiplier of 1.68 approximately equal to the mean multiplier of our smallest employment size class. It happens that Beaver County is adjacent to Allegheny County and to a large extent serves as a "bedroom community" for Allegheny County. That is, many of the people actually employed in Pittsburgh are residents of Beaver County, but for many of these residents, Pittsburgh in Allegheny County serves also as a shopping and leisure activity center. Hence the low multiplier value for Beaver County. In general, dispersion of the multiplier about the mean value of each employment size class does not necessarily invalidate the estimate. Rather, as in the case of Beaver County, special circumstances may obtain. All we infer is that the local multiplier will be larger according as local employment (and local production) to service local consumption is greater, relative to total local employment. While we would expect that larger multipliers will obtain for larger employment size classes, it does not necessarily follow that all multiplier estimates for all larger counties are larger than all multiplier estimates for all smaller counties. Nonetheless, the multipliers estimated in this study do evidence biases in spite of the fairly regular normal dispersion of multiplier values about the mean value for each employment size class.

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[1] Op. Cit.

[2] It is not clear how (systematically) Isard adjusted for investment and government expenditures in his adjusted multipliers.

c. Since we estimated multipliers for 375 counties in this study and since the data we used were disaggregated into 32 employment sectors, yielding 12 thousand county-employment sectors, we had to resort to use of the correction term, (equation 6a in the model) in 624 instances or 5.2 percent of all the county-employment sectors. The requirement to set the correction term into operation was disproportionate to the county employment size classes. Thus while counties whose total employment was less than five thousand accounted for 35 percent of the total number of counties, they accounted for 44 percent of activation of the correction mechanism. The disproportion of smaller counties is largely due to the disproportion (in the operation of the correction device) by employment sector. Thus Agriculture, Forestry and Fishery, Mining and Lumber, Wood products and Furniture -- large proportions of which occur in less densely populated counties -- account for more than 60 percent of the total application of the correction device, and counties whose total employment is less than five thousand account for more than 57 percent of these instances.

Since the correction mechanism operated to prevent the exogenous employment in any sector from becoming larger than the total employment in that sector, it can be observed that the net effect of the correction mechanism on the multiplier value is to limit the downward bias where the location coefficient and the non-personal consumption coefficient tend to be very large values. Clearly, such a downward bias seems to have been disproportionately visible in the smaller size county employment classes.

On the other hand, an upward bias in counties in which mining was a significant sector is evidenced. Of 196 counties in which mining was an export sector in 1960, 79 of these or more than 40 percent, were smaller counties of under five thousand total employment. The element of bias stems from the change in employment in mining between 1950 and 1960. This change was overwhelmingly downward, after affecting total employment in the counties in the same direction, but not the same proportion. That is, in many cases decreases in total employment in counties, between 1950 and 1960, were caused by like decreases in mining employment. In a large proportion of these cases, therefore, the decreases in exogenous, mining, employment were not accompanied by similar decreases in endogenous, retailing, wholesaling and other service,employment. Thus the county multiplier rose between 1950 and 1960 in those counties. We hypothesize that, had we used income rather than employment data, some decrease would have shown also in the endogenous sectors, thereby restraining the rise of the multipliers in these cases.

Thus, particularly for smaller mining counties in Appalachia, using employment data, an upward bias is evidenced in correspondence with the decrease in mining employment.

d. As indicated in the earlier discussion on structuring the model in order to estimate the multipliers, there are many theoretical deficiencies in these measures.1/ Aside from the other deficiencies listed in the literature, we note that in addition to the national average consumption pattern we assume by using the location coefficient to identify regional exports, we have compounded this national averaging further by adopting the proportion of nonpersonal consumption expenditures

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1/ Some of these deficiencies are listed or elaborated upon in Isard and Czamanski, op. cit., and in W. Isard, Methods of Regional Analysis, Technology Press, M.I.T., and J. Wiley and Sons, New York. 1960.

to total expenditures ratio by sector using the 1958 national input-output table in order to identify other exogenous sectors. Thus by using these two coefficients to extract our exogenous sectors we have implicitly postulated a national consumption pattern which, to some extent, obviates regional differences. Clearly, the greater the divergence of county per capita income from national per capita income, the greater will be the regional difference in the county consumption pattern from the national pattern. To the extent that smaller sized counties have lower incomes than the national average and expend a greater proportion of their incomes than is true of the national pattern on local primary products, we have underestimated the endogenous sector of these county size classes and therefore underestimated their multipliers.

In spite of the adduced theoretical and empirical bases of biases with respect to the multipliers estimated in this study -- and especially with respect to the smaller county employment size class multipliers -- the arguments developed earlier in sections (a) and (b) seem to us to be of greater weight in accepting these multipliers as fair orders of magnitude and relative orders of magnitude in a first and overall approximation.

In Table C-III, following, the employment multipliers are arranged alphabetically by state and by county for 376 Appalachian counties and independent cities.

TABLE C-III

COUNTY EMPLOYMENT MULTIPLIERS, 376 COUNTIES OR INDEPENDENT CITIES IN APPALACHIA

State, County	Multiplier
ALABAMA	
Bibb	1.76
Blount	1.89
Calhoun	2.03
Chambers	1.57
Cherokee	1.59
Chilton	1.89
Clay	1.80
Cleburne	1.81
Colbert	1.98
Coosa	1.88
Cullman	1.92
Dekalb	1.81
Elmore	1.91
Etowah	2.08
Fayette	1.81
Franklin	2.04
Jackson	1.77
Jefferson	2.37
Lauderdale	2.12
Lawrence	1.75
Limestone	2.03
Madison	2.01
Marion	1.69
Marshall	2.13
Morgan	2.34
Randolph	1.62
St. Clair	2.08
Shelby	2.03
Talladega	2.19
Tallapoosa	1.73
Tuscaloosa	2.31
Walker	2.07
Winston	1.71
GEORGIA	
Banks	1.50
Barrow	1.86
Bartow	1.94
Carroll	2.02
Catoosa	2.13

GEORGIA, Continued	Multiplier
Chattooga	1.61
Cherokee	1.92
Dade	1.80
Dawson	1.61
Douglas	2.13
Fannin	1.87
Floyd	2.27
Forsyth	1.72
Franklin	1.71
Gilmer	1.64
Gordon	1.62
Gwinnet	2.12
Habersham	2.02
Hall	2.25
Haralson	1.81
Heard	1.68
Jackson	1.86
Lumpkin	1.68
Madison	1.82
Murray	1.62
Paulding	1.80
Pickens	1.68
Polk	2.13
Rabun	1.83
Stephens	2.02
Towns	1.69
Union	1.53
Walker	2.03
White	1.62
Whitfield	1.82
KENTUCKY	
Adair	1.59
Bath	1.47
Bell	2.18
Boyd	1.86
Breathitt	1.75
Carter	1.74
Casey	1.46
Clark	2.03
Clay	1.57
Clinton	1.58
Cumberland	1.49
Elliott	1.40
Estill	1.69
Fleming	1.61

KENTUCKY, Continued	Multiplier
Floyd	1.70
Garrard	1.61
Green	1.47
Greenup	1.82
Harlan	1.88
Jackson	1.51
Johnson	2.13
Knott	1.59
Knox	2.16
Laurel	1.98
Lawrence	1.85
Lee	1.62
Leslie	1.47
Letcher	1.75
Lewis	1.62
Lincoln	1.68
McCreary	1.92
Madison	2.17
Magoffin	1.80
Martin	1.67
Menifee	1.53
Monroe	1.59
Montgomery	1.85
Morgan	1.58
Owsley	1.52
Perry	1.98
Pike	1.80
Powell	1.68
Pulaski	1.94
Rockcastle	1.84
Rowan	2.29
Russell	1.65
Wayne	1.53
Whitley	2.13
Wolfe	1.41
MARYLAND	
Allegany	2.21
Garrett	2.00
Washington	1.75
NEW YORK	
Allegany	2.36
Broome	2.06
Cattaraugus	2.37
Chautauqua	2.52

NEW YORK, Continued	**Multiplier**
Chemung	2.31
Chenango	2.36
Cortland	2.53
Delaware	1.88
Otsego	2.26
Schuyler	2.19
Steuben	2.23
Tioga	2.07
Tompkins	1.97
NORTH CAROLINA	
Alexander	1.63
Alleghany	1.58
Ashe	1.48
Avery	1.83
Buncombe	2.50
Burke	1.78
Caldwell	1.66
Cherokee	1.91
Clay	1.75
Davie	1.82
Forsyth	2.13
Graham	1.58
Haywood	1.70
Henderson	2.29
Jackson	2.16
McDowell	1.62
Macon	1.74
Madison	1.64
Mitchell	1.80
Polk	1.81
Rutherford	1.81
Stokes	1.44
Surry	1.70
Swain	1.90
Transylvania	1.83
Watauga	1.88
Wilkes	1.87
Yadkin	1.68
Yancey	1.68
OHIO	
Adams	1.92
Athens	2.14
Belmont	2.19
Brown	2.02

OHIO, Continued	Multiplier
Carroll	1.70
Clermont	2.21
Coshocton	2.01
Gallia	1.69
Guernsey	2.19
Harrison	1.81
Highland	2.29
Hocking	1.98
Holmes	1.84
Jackson	2.34
Jefferson	1.72
Lawrence	2.02
Meigs	2.13
Monroe	1.66
Morgan	2.00
Muskingum	2.16
Noble	1.86
Perry	1.86
Pike	2.02
Ross	2.23
Scioto	2.02
Tuscarowas	1.91
Vinton	1.95
Washington	2.48
PENNSYLVANIA	
Allegheny	2.43
Armstrong	1.89
Beaver	1.68
Bedford	2.16
Blair	2.29
Bradford	2.23
Butler	2.14
Cambria	1.86
Cameron	1.58
Carbon	1.78
Centre	2.30
Clarion	2.05
Clearfield	2.11
Clinton	2.02
Columbia	2.06
Crawford	2.29
Elk	1.73
Erie	2.22
Fayette	2.18
Forest	1.69

PENNSYLVANIA, Continued	Multiplier
Fulton	1.56
Greene	2.06
Huntingdon	2.26
Indiana	2.34
Jefferson	2.21
Juniata	1.81
Lackawanna	2.38
Lawrence	1.92
Luzerne	2.46
Lycoming	2.33
McKean	1.95
Mercer	1.87
Mifflin	2.26
Monroe	2.28
Montour	1.87
Northumberland	2.33
Perry	2.20
Pike	2.27
Potter	2.12
Schuylkill	2.14
Snyder	2.12
Somerset	2.41
Sullivan	1.90
Susquehanna	1.97
Tioga	1.91
Union	2.15
Venango	2.10
Warren	2.13
Washington	1.97
Wayne	2.07
Westmoreland	1.87
Wyoming	2.42
SOUTH CAROLINA	
Anderson	1.90
Cherokee	1.82
Greenville	2.16
Oconee	1.81
Pickens	1.63
Spartanburg	2.03
TENNESSEE	
Anderson	1.75
Bledsoe	1.53
Blount	2.19
Bradley	2.20

TENNESSEE, Continued	Multiplier
Campbell	2.15
Carter	2.22
Claiborne	1.71
Clay	1.38
Cocke	1.75
Coffee	2.05
Cumberland	2.20
Dekalb	1.45
Fentress	1.66
Franklin	2.21
Grainger	1.45
Greene	1.88
Grundy	1.82
Hamblen	2.19
Hamilton	2.63
Hancock	1.34
Hawkins	1.75
Jackson	1.52
Jefferson	1.84
Johnson	1.62
Knox	2.59
Loudon	1.93
McMinn	2.17
Macon	1.47
Marion	1.90
Meigs	1.56
Monroe	1.54
Morgan	1.75
Overton	1.53
Pickett	1.35
Polk	1.83
Putnam	2.25
Rhea	2.07
Roane	2.08
Scott	1.85
Sequatchie	1.73
Sevier	1.90
Smith	1.55
Sullivan	2.35
Unicoi	2.02
Union	1.68
Van Buren	1.13
Warren	1.93
Washington	2.59
White	1.64

VIRGINIA	Multiplier
Alleghany (incl. Covington)	1.68
Bath	1.60
Bland	1.52
Botetourt	2.01
Buchanan	1.56
Carroll (and Grayson (incl. Galax)	1.67
Craig	1.69
Dickenson	1.67
Floyd	1.50
Giles	2.04
Highland	1.41
Lee	1.71
Pulaski	1.95
Russell	1.52
Scott	1.64
Smyth	2.07
Tazewell	2.13
Washington	2.22
Wise (incl. Norton)	1.91
Wythe	1.89
Bristol (Independent City)	2.53
Clifton Forge (Independent City)	1.80
Radford (Independent City)	2.11
WEST VIRGINIA	
Barbour	1.86
Berkely	2.33
Boone	1.75
Braxton	1.78
Brooke	1.65
Cabell	2.58
Calhoun	1.86
Clay	1.94
Doddridge	2.00
Fayette	2.10
Gilmer	1.82
Grant	1.86
Greenbrier	1.98
Hampshire	1.75
Hancock	1.50
Hardy	1.80
Harrison	2.36
Jackson	1.68
Jefferson	2.33
Kanawha	2.31

WEST VIRGINIA, Continued	Multiplier
Lewis	2.19
Lincoln	1.80
Logan	1.77
Marion	1.93
Marshall	1.90
Mason	1.85
McDowell	1.66
Mercer	2.22
Mineral	1.97
Mingo	1.80
Monongalia	2.32
Monroe	1.74
Morgan	1.92
Nicholas	1.82
Ohio	2.40
Pendleton	1.54
Pleasants	2.04
Pocahontas	1.97
Preston	1.93
Putnam	1.80
Raleigh	2.05
Randolph	2.18
Ritchie	2.07
Roane	2.13
Summers	2.04
Taylor	2.14
Tucker	1.95
Tyler	1.85
Upshur	2.01
Wayne	2.37
Webster	1.75
Wetzel	1.81
Wirt	1.73
Wood	2.55
Wyoming	1.56

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